RISHIKESH SREEHARI

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Energy professional passionate about a sustainable future, leveraging expertise in energy system modelling to develop open energy models for crafting impactful low-carbon strategies and pathways.

WORK EXPERIENCE

Vasudha Foundation **New Delhi, IN**

A non-profit policy think tank working at the intersection of climate, energy and environment.

Policy Officer – Energy & Power **Oct 2022 – Nov 2023**

- Developed a myopic optimisation model using the PyPSA framework to evaluate net-zero pathways in Kerala, integrating model workflows and testing scenario sensitivities for high renewable integration.
- Forecasted India's peak demand and seasonal/regional load profiles through 2030, analyzing the evolving demand patterns, especially in residential cooling needs, alongside other macroeconomic parameters.
- Conducted granular analysis to dissect India's electricity consumption growth, emphasizing structural shifts, energy intensity improvements, and sector-specific activity effects.
- Co-led long-term demand forecasting for Indian states using end-use and econometric models, projecting India's mid-term peak electricity demand.
- Devised the solar city action plan for Ghaziabad by creating a comprehensive project report, MoUs, and strategy documents in collaboration with the Nagar Nigam (Municipal Corporation) and Uttar Pradesh New & Renewable Energy Development Agency (UPNEDA).
- Coordinated the outreach of the SiteRight Tool, a responsible renewable energy siting tool, across Gujarat, Rajasthan, and Uttar Pradesh in collaboration with The Nature Conservancy.
- Organized regional-level workshops at the subnational level to facilitate the development of decarbonization strategies and stakeholder consultations.

Husk Power Systems **Patna, IN**

A rural distributed utility serving off-grid and week-grind communities in India, Nigeria and Tanzania

Senior Product Engineer **Aug 2021 – Sep 2022**

- Modelled an Excel-based tool for calculating LCOE of hybrid mini-grid sites consisting of solar, biomass and battery technologies involving load forecasting, capacity expansion and financial models.
- Managed 120+ solar-biomass hybrid mini-grid sites in rural India to provide 24x7 reliable clean electricity to rural households, SMEs and factories ensuring +95% customer satisfaction using remote monitoring platforms and smart metering technologies.
- In liaison with management and software team, defined features and KPIs for the development, testing and piloting of an internal dashboard for business analytics, performance metrics, remote monitoring, control and management of mini-grid sites using the IoT edge platform.

Product Engineer **Jul 2019 – Aug 2021**

- Conceptualised, piloted and launched a vernacular Android customer app based on Human Centered Design (HCD) principles for 5000+ mini-grid customers in rural India focusing on providing basic energy information and cashless transactions. The app played a crucial role in completely digitizing payments, resulting in zero cash transactions and significantly reducing costs and payment delays.
- Trained 100+ electricians, service engineers, sales personnel and other team members on energy awareness, safety practices, online customer app and internal software for managing the mini-grids.
- Modelled a distribution loss calculator in MS Excel for mini-grids and identified the root cause of distribution losses in the mini-grid transmission network.
- Proposed a smart distribution box to reduce the non-technical losses by under 20% through theft detection and phase balancing.

International Centre for Technological Innovations [redacted] **Alappuzha, IN**
A not-for-profit open innovation centre focusing on social innovation and technology commercialisation.
Research Associate **Jun 2016 – Jul 2017**

- Conceptualized and developed a crowdfunding platform (https://www.indovator.com/) to support young innovators in commercializing technologies in the areas of 8 key United Nations Sustainable Development Goals (SDGs).
- Established and managed a pan India network of 60 Universities and 10 Research Institutions and sourced 100+ technologies as a part of the project.

PUBLICATIONS

- Pachouri, R., Thakare, S., Sreehari, R. and Sinha, S., 2023. Managing Peak Electricity Demand in the Indian Electricity Sector. *Vasudha Foundation*. Available at: https://www.vasudha-foundation.org/wp-content/uploads/Peak-Electricity-Demand-Report_Final_24Jan2024_for-WEB.pdf
- Thakare, S. and Sreehari, R., 2023. Energy Storage and Its Potential Role in Electricity Transition. *The Role of Coal in a Sustainable Energy Mix for India*, p.251.

EDUCATION

Heriot-Watt University **Edinburgh, UK**
Master of Science in Renewable Energy and Distributed Generation 2017-2018
DFID's Commonwealth Shared Scholar, Founder & Vice-President of Photography Society

- Feasibility study of a subsea pumped hydro storage for meeting renewable intermittency
- Strategy for contingent evaluation of environmental costs and benefits for a wind developer.
- Evaluation of Energy Storage Options for 100% Renewable Electricity Generation in Scotland.

Cochin University of Science & Technology **Kochi, IN**
Bachelor of Technology in Mechanical Engineering 2012 - 2016
Coordinator-Technology Business Incubator (TBI), Member – SAE, IEEE Student Chapter

SKILLS

Programming: Python, HTML/CSS, SQL
Modelling Expertise: PyPSA package
Other Skills: Microsoft Excel, WordPress, Git for Version Control, QGIS
Languages: English (Full Professional), Hindi (Advanced), Malayalam (Native)

AWARDS

- **Commonwealth Shared Scholarship 2017-2018** funded by the UK Department for International Development (DFID) for covering full tuition fees and maintenance expenses of post-graduate study at Heriot-Watt University, UK
- **Research Fellowship 2016-17,** awarded by the International Centre for Technological Innovations (ICTI), Kerala, India

REFERENCES

- Shubham Thakare
  Senior Manager - Low Carbon Pathways & Modelling, Vasudha Foundation
  [redacted]
- Nikhil Murarka
  VP – Engineering & Innovation, Husk Power Systems
  [redacted]
- Dr. Gudrun Kocher-Oberlehner (MSc Project Supervisor at Heriot-Watt University,UK)
  Assistant Professor of Engineering, University College Roosevelt
  [redacted]