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## Performance and emission analysis of 1.5 MW photovoltaic energy systems

Md. Fahim Ansari

JK Laxmipat University, India

India has high solar insolation, making the place good for solar power initiatives. Thar Desert has been set aside for solar power projects, sufficient to generate 700 to 2,100 GW. India unveiled a \$19 billion plan to produce 20 GW of solar power by 2020. India receives solar energy equivalent to over 5,000 trillion kWh/yr. The daily average solar energy incident varies from 4 -7 kWh/m<sup>2</sup> depending upon the location. Many parts of the country do not have an electrical grid. The paper presents performance, sensitivity analysis and optimization studies are carried out for PV energy system proposed at Minambakkam. Energy model of 1.5 MW PV energy systems is simulated to judge its performance. Two configurations are analyzed one with battery and other without it battery for PV system, capital and replacement multipliers has been chosen as 0.8, and PV life 20 yr. Considering energy security, results with battery cash flow summary is illustrated in this paper.

### Biography

Md. Fahim Ansari received PhD (Electrical Engineering) from NITTTR Chandigarh, Punjab University, Chandigarh MTech (Electrical Engineering) From Central University AMU Aligarh BTech (Electrical Engineering). He has published over twenty two research papers in international and national journals/conferences and supervised more than 13 MTech theses. His many research papers have been awarded by international and national committees/conference. He has chaired several national conferences. He has given expert lecture in various colleges like NITTTR Chandigarh. He has visited many countries for attending and presenting the research papers in the international conferences. Currently, he is supervising two PhD scholars and evaluated two PhD theses. He is the active reviewer of IEEE Journal, Taylor and Francis Elsevier and other various journals. He is member of BOG of BRCM CET Bahal.

[fahim402001@yahoo.co.in](mailto:fahim402001@yahoo.co.in)

## Diversity of Poecilostomatoida copepods including new records from Kavarathi, Lakshadweep Island, India

R Radhika, S Bijoy Nandan, V F Sanu and Rithin Raj

Cochin University of Science and Technology, India

Since 1972 many eminent scientists have been surveying zooplankton assemblages with special reference to copepods mainly on calanoid copepods and little on cyclopoid copepods. Copepod research in Kavarathi island of Lakshadweep archipelago started with Goswami (1973, 1979, and 1983) from National Institute of Oceanography, who reported 52 species from Kavarathi lagoon and sea among which only 16 species belonged to cyclopoid group, the rest being calanoids. Subsequent studies in this same region by Madhuprathap et al (1977) included 30 species out of which only 7 were under cyclopoids and the rest being majority of calanoids. Madhuprathap et al (1991) yielded only one cyclopoid and 14 species of calanoids from Kavarathi, Kadamat and Minicoy islands. Suresh and Mathw (1997), CMFRI, Cochin also reported copepods from Kavarathi. Six species of cyclopoids were only reported by Usha Goswami and Goswami (1990) from Kavarathi and Minicoy islands, the rest being 33 species of calanoids and 3 harpacticoids. Recent studies by Robin et.al (2012) reported only 3 cyclopoid species, 10 species of calanoids and 1 belonging to Harpacticoida. Taxonomic and diversity studies on copepods in Lakshadweep islands have usually been concentrated on calanoid group and little is known about the marine cyclopoid groups. The present study briefly outlines 16 species of Poecilostomatoid copepods identified from Kavarathi Island, Lakshadweep, of which 13 are new records from Kavarathi region.

### Biography

R Radhika is a Junior Research Fellow pursuing her PhD in the Department of Marine Biology, Cochin University of Science and Technology, under the supervision of Dr. S. Bijoy Nandan, under the Department of Biotechnology funder project "Taxonomy and genetic characterization of pelagic copepods from marine habitats along south west coast of India".