11-2-2021

Optimizing Offshore Wind Power Generation Cost in India

Prasun Bhattacharjee
Jadavpur University, prasunbhatta@gmail.com

Rabin K. Jana
Indian Institute of Management Raipur, rabinjana@gmail.com

Somenath Bhattacharya
Jadavpur University, snb_ju@yahoo.com

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Completed Research Paper

Prasun Bhattacharjee
Jadavpur University
prasunbhatta@gmail.com

Rabin K. Jana
Indian Institute of Management Raipur
rkjana1@gmail.com

Somenath Bhattacharya
Jadavpur University
snb_ju@yahoo.com

ABSTRACT

As global climate change is triggering calamitous penalties, renewable power generation sources like wind energy offer a suitable alternative to conventional fossil fuels to abate greenhouse gas releases. For enabling the expanding power requirement of its emergent financial system, India requires to trace more lucrative wind farm locations. The existing work purposes to minimize the wind energy expense in the offshore location of the Gulf of Khambhat employing a Genetic Algorithm. The static and dynamic methods for assigning the crossover and mutation fractions have been engaged concurrently to evaluate their comparative effectiveness. The research outcomes demonstrate the superior efficiency of the dynamic tactic over the static tactic of allocating the crossover and mutation ratios of genetic algorithm-based cost optimization for wind power generation at the Gulf of Khambhat.

Keywords

Wind Power, Cost Optimization, Genetic Algorithm, Crossover and Mutation Ratios.