

Optimal Type and Installation Time of Wind Farm in a Power System, Considering Service Providers

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Abstract : The economic development benefits of wind energy may be the most tangible basis for the local and state officials’ interests. In addition to the direct salaries associated with building and operating wind projects, the wind energy industry provides indirect jobs and benefits. The optimal planning of a wind farm is one most important topic in renewable energy technology. Many methods have been implemented to optimize the cost and output benefit of wind farms, but the contribution of this paper is mentioning different types of service providers and also time of installation of wind turbines during planning horizon years. Genetic algorithm (GA) is used to optimize the problem. It is observed that an appropriate layout of wind farm can cause to minimize the different types of cost.

Keywords : renewable energy, wind farm, optimization, planning

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