

**BIOGEOGRAPHY BASED OPTIMIZATION (BBO) FOR ECONOMIC  
LOAD DISPATCH (ELD) PROBLEM**

**This thesis is presented in partial fulfillment for the award of the  
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***“In the Name of Allah, Most Gracious, Most Merciful”***

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## **ABSTRACT**

This paper presents a Biogeography Based Optimization (BBO) for Economic Load Dispatch (ELD) problems. Using this method, the biological algorithm in optimization problem can be studied and the best minimum of total generation cost can be obtained. ELD is used to allocate the power generators to meet the total load demand at minimum operating cost while satisfying an equality and inequality constraints. This method seems to be a promising alternative approach for solving ELD problems in practical power system. The ELD based BBO are tested on six generators with limit and without losses. The power demand is set as 1263MW. The proposed BBO shows that BBO can be used to solve the economic dispatch problem.

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