

# **Cost-benefit analysis of suggested Ramadi Barrage hydroelectric plant on the Euphrates River**

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## **Abstract**

In recent times, the demand for electricity has increased in the world for many reasons including the increase in the population. Power can be obtained from many sources but clean energy is the focus of scientific research in the world now due to increased gas emissions and trying to find a cheaper alternative to oil derivatives. In this research, the electricity generation from low-altitude systems and the potential profits and costs of the project were assessed. The Ramadi barrage across the Euphrates at Anbar province of Iraq was taken as a case study. The number of turbines to be developed in the study area is 6 Kaplan turbines. The amount of energy to be produced from the Ramadi barrage would be between 12–24 megawatts at a total cost of 4,309,427\$ with total benefits 7,999,018 \$/year.