

**The Economic Feisability of Constructing Small Hydropower Schemes in the  
Khuzistan RegionThe Saydoun powerplant chain : A specific Study.**

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**Abstract:**

One of the most common renewable energy resources existant, is the energy obtained from small hydroelectric power plants. Due to the negative effects of fossil fuels on the environment and their limited resource, small hydro electric power plants are finding more and more advocates in recent years. An economical study of these kinds of power plants show that due to the low costs of construction during the first years of operation a positive cash flow incurs which shows its economic viability, In this article the Saydoun power plant chain ( consisting of three hydro power plants i.e Saydoun 1, Saydoun 2 and Saydoun 3) which all together have a capacity of about 21MW and which are located on the Saydoun tributary of the Karun river in the Khuzistan Province have been taken into account.

In the consideration of the economical benefits, three methods of evaluation have been taken in to account.

- a) The using of international energy tariffs.
- b) The using of alternative Thermal power plants.
- c) The using of local power tariffs.

These in themselves show that in the alternative thermal power plant option, although there is a falling off of the benifit – costs ratio over a period of time and thus a decrease in the cash flow, the sensitivity of the project has a decrease of 5% relative to the depreciation value.

It is with due consideration to the aforementioned that the benefit over cost ratio with a depreciation value of 8% , has been calculated at 1.2 which shows the project has high economical and industrial benifits.