

New method for estimating cost of small hydropower projects

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In developing countries such as India, small hydroelectric power (SHP) projects represent a potentially large but largely untapped source of energy, primarily because the cost of constructing the sites is thought to be higher per kilowatt of generated power than the cost of large plants.

But is it? To find out, Sunil Singal, Senior Scientific Officer at the Indian Institute of Technology in Roorkee, India, developed a method, described in the American Institute of Physics' Journal of Renewable and [Sustainable Energy](#), to assess the installation and operating costs of small hydroelectric power projects known as dam toe SHP schemes.

"In a dam-based [hydroelectric plant](#), a dam is constructed to store the seasonal water for [power generation](#)," explains Singal. Some dams, however, already exist for other purposes -- such as flood mitigation, irrigation, and drinking water production.

"These dams are not constructed for power generation, but when water flows from dam outlets under pressure, due to the water-level difference upstream and downstream of the dam, there is a possibility of power generation," he says. Singal's analysis of these projects suggests that they are indeed financially viable.

"The methodology can be used by developers to plan investment in such schemes," he says.

More information: [doi:10.1063/1.3464755](https://doi.org/10.1063/1.3464755)

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