Microhydropower system Kenya

What is a micro-hydro system?

Micro-hydro systems -- those that produce less than 100 kilowatts of electricity-- can offer a sustainable and continuous source of renewable energy on farms. This publication is designed to introduce the reader to all stages of a micro-hydro project -- from first considering the idea all the way through to producing power.

What is a micro-hydro project?

Remember,micro-hydro projects that produce renewable powerand avoid visually disturbing the natural environment with the intake,pipe,cables,and other equipment demonstrate how to produce energy in a more sustainable manner. Roger and Shelley Barton own and operate Barton Farm in Ferron,Utah.

Are micro-hydro systems a good investment?

When carefully designed, micro-hydro systems will generate years of hassle-free energy at costs that may be very competitive with retail rates available from your power company. There are several potential sources of financial assistance available for micro-hydro projects at the state and federal level.

How much does a micro-hydro system cost?

These costs may be in the range of $10,000 to $30,000 per miledepending upon the power company,making micro-hydro systems appear very attractive in remote locations. Here are several questions to help you determine whether a micro-hydro system is best for you: How much energy do you need (e.g.,kilowatt-hours and horsepower)?

What are the environmental considerations for micro-hydro systems?

There are a number of environmental considerations for micro-hydro systems. Among them are the following: Micro-hydro systems that are nonconsumptive and "run of river" -- meaning that the natural water flow and elevation drop is used to generate power and the water is directed back into the stream -- generally have a small environmental impact.

Are micro-hydro systems better than large hydropower dams?

When water is diverted or dammed,or when structures installed in the stream channel interfere with the natural flow of the water,there is an environmental impact. However,compared to large hydropower dams,micro-hydro systems have a smaller footprint and generally lower environmental impacts.

The goal is to identify your hydropower system"s "design flow" -- the maximum flow for which the system is cost effective and environmentally sustainable to use. There are several methods for measuring flow.

In Kenya, this transition is spearheaded by the adoption of hydro energy for electricity generation purposes. This study proposes the use of micro hydro plants toward the rural electrification of river Rutui region.

participation on the implementation of off-grid micro-hydropower projects in Kenya, a case of Iriamaina Micro hydropower in Bomet County. The objectives that guided the study were: to ...

With support from organisations such as WWF, Kenya"s National Environment Trust Fund (NETFUND) and Switch Africa, he was able to scale-up the plant from the initial 7.5kW and connect more customers by expanding what had become an 8km mini-grid.

An excellent example is the Tungu-Kabiri project in Kenya, which I describe on my website This project at the slopes of Mount Kenya provides power to a local micro enterprise centre that ...

The purpose of this study was to evaluate the influence of stakeholder participation on the implementation of off-grid micro-hydropower projects in Kenya, a case of Iriamaina Micro hydropower in Bomet County.

With the benefit of direct experience in implementing a micro hydro power scheme, the Ministry was inspired to review decentralised power policy in Kenya, leading to the improvement of Energy policy relating to decentralised power production.

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Kenya"s installed hydropower capacity is above 800 MW. The potential for small, mini and micro-hydro system is estimated at 3,000MW nationwide. However, the installed grid connected small-scale hydro-electric projects contribute only about 15.3 MW.

The potential for small, mini and micro-hydro system (with capacities of less than 10MW each) is estimated at 3,000MW nationwide. However, the installed grid connected small-scale hydro-electric projects contribute about 15.3 MW, though there are several other small hydro schemes under private and community generation especially in the tea ...

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This study explored the challenges and opportunities associated with the sustainable management of micro hydropower systems by evaluating some of the systems which are in existence in the Mt. Kenya region. Data collection was based on field surveys and key informant interviews, complimented by a review of the existing literature.

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