

Agricultural Based Hydroelectricity Generate in Pipe Line Through

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Abstract: *Hydroelectric power is a renewable resource that provides 96% of the renewable energy in the United States. It comes from flowing water, which can be used to turn turbines and generators that produce electricity. It has played an important role in the development of the electric power industry, supplying as much as 40% of the electric energy produced in the 1920s. It is an essential contributor to the national power grid due to its ability to respond quickly to rapidly varying loads or system disturbances. In addition to photovoltaic and wind systems, nowadays in-pipe water to wire power systems are becoming particularly interesting for the integration of renewable resources at urban and building scale because of the potential to harness clean energy from excess head pressure in urban and domestic water pipelines. Able to operate across a wide range of head and flow conditions, these particular micro hydro power systems can be deployed in municipalities, energy-intensive industries and agricultural irrigation districts providing a consistent amount of clean and continuous energy without the typical intermittency of wind and solar and at the same time helping in pipelines management and maintenance. The article presents an overview of the different types of in-pipe hydro systems available on the market and illustrates their possible applications at the urban and building scale and the benefits achievable in terms of energy production compared to other renewable such as photovoltaic and wind systems.*

Keywords: Hydroelectric power.

I. INTRODUCTION

Hydroelectric power is a renewable resource that provides 96 percent of the renewable energy in the US, and has been instrumental in the development of the electric power industry.

Hydroelectric power is important to the Nation as it provides 40% of the electric energy produced in the 1920s, but other types of power plants have increased faster.

It currently supplies 10% of the electrical generating capacity of the US.

Hydropower is an essential contributor to the national power grid due to its ability to respond quickly to varying loads or system disturbances. Reclamation's 58 power plants produce an average of 42 billion kWh per year, enough to meet the residential needs of 14 million people

They are the most efficient means of producing electric energy.

Hydroelectric power is a form of solar energy, as the sun powers the hydrologic cycle which gives the earth its water.

Nature ensures that water is a renewable resource by allowing ground water to move upward and return to the atmosphere by evaporation, condensing into clouds, and returning to earth as precipitation.

Hydroelectric power (hydropower) systems convert the kinetic energy in flowing water into electric energy.

Falling or flowing water turns a propeller like piece called a turbine.

The turbine turns a metal shaft in an electric generator which produces electricity

II. LITERATURE SURVEY

This project aims to design a pipeline turbine energy system to produce electricity while working on an optimum rotor.

The aim is to create the most efficient power harnessing turbine to produce cheapest and clean source of energy in India, where both income and energy are deplorable. Renewable energy sources are the ultimate solution to these problems.

n-pipe systems offer many advantages in terms of quantity of energy produced and supply continuity without the problems of architectural integration and dependence on weather conditions typical of photovoltaic and wind systems. To promote these systems, it is important to expand, co-ordinate and disseminate results of in-pipe micro and pico hydro technology development to improve operational performance, reduce costs and foster technologies to better support the grid integration of large amounts of variable renewable energy. This will help to achieve a clean and resilient electricity system that supports efficient, flexible, reliable and affordable operation.

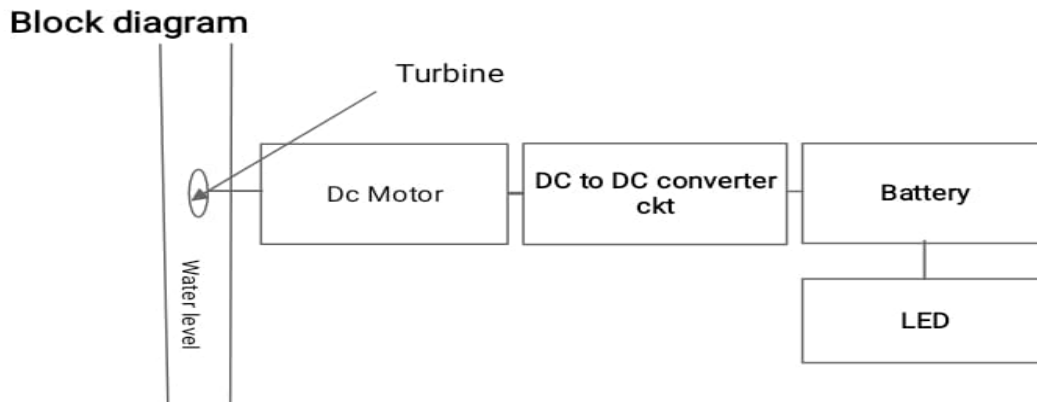
1.1 Objective

This project aims to design a pipeline turbine energy system to produce electricity while working on an optimum rotor. The aim is to create the most efficient power harnessing turbine to produce cheapest and clean source of energy in India, where both income and energy are deplorable. Renewable energy sources are the ultimate solution to these problems.

We can use hydroelectric generator at agriculture, home automation, pressure pipeline ,etc .In farm we can generate electricity from hydroelectric generator by the help of water pressure. This energy we can use by connecting LED bulb, charger, etc.

III. METHODOLOGY

3.1 Block Diagram



IV. CONCLUSION

The introduction of a micro hydro power plant will reduce the huge burden without any adverse impact on the environment when meeting the localized electricity requirement.

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