

# Micro Hydropower Calculator Results

## Financial Viability Summary

### Definitions

- Flow rate, or volume flow rate is the volume a liquid travels in a given time.
- Pressure head is the mechanical energy of the flow per unit weight.
- Power is the power gained by the fluid for example from a pump.
- Unit cost of electricity: The price-per-unit of the electricity you consume for personal or productive use. For example, electricity is measured in kilowatt per hour (kWh), so a unit rate would be the cost per each kWh used.
- Renewable incentives or rebate: Typically a government scheme that provides financial incentives or rebate to those planning to install new renewable energy technologies.
- Total installation cost (TC) is the cost of the MHP system including the PAT + generator, ancillary devices and the civil works.
- Time (t) is an index related to year
- Discount rate (r) refers to the interest rate used to determine the present value
- Net present value (NPV) provides today's value (in Euros) of a potential investment by taking into account all costs and savings for the lifetime of the project. NPV helps to directly compare alternative solutions and can reflect energy price increases over time and also helps to directly compare alternative projects.

- Payback period is how long the system will pay for itself before it is decommissioned or replaced
- Useful life is the estimated lifespan of the MPD devices and installation
- Total savings (TS), or simple payback is the total energy savings per year
- Levelized cost of energy LCOe is used to directly compare unit electricity price against the mains grid rates. If the LCOe is less than the utility price, then the project is economically feasible. LCOe, however, does not account for energy price escalation. Nevertheless, it can be used to compare against projected future price increase.

Further information can be [found here](#). It is recommended to consult a competent professional before undertaken a MHP project.

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