



Pros & Cons of Water Wheels & Hydro Power

Pro: Hydro Power is renewable

One of the biggest advantages when considering the hydro power pros and cons is that hydro electric power is renewable. Since this form of power generation utilizes the earth's own water-which naturally evaporates, forms clouds in the sky, and then rains down again to be absorbed by the soils-the source of hydro power (i.e., water) isn't going anywhere, regardless of how much energy we produce with it.

In most cases, the rivers and lakes that we use to generate hydro power are never going to disappear. In other words, you can't "use up" the water that enables hydro electric power generation. This also means we don't need to worry about scarcity driving up prices. However, there is a limited number of places where it's suitable to build a hydro electric power plant-and even fewer where it's worthwhile to do so.

Con: Hydro Power is effected by droughts

When a local drought hits and water slows down, that means a hydro power plant isn't able to produce the power a local area needs in order to function. While local dry spells are more common in some areas than others, unpredictable and unexpected droughts can happen-and that is a huge risk whenever hydro power is relied on.

Pro: Hydro Power is clean

As you may have guessed, the process of producing hydroelectricity is a clean one. That means no greenhouse gasses are emitted in the process. The environment is not harmed by pollution, unlike with the burning of coal or natural gas.

Con: Hydro Power leads to carbon dioxide and methane emissions

When the dam floods an area, the plants underneath the water will start to decompose over time. With no oxygen, this leads to carbon dioxide and methane emissions, and that can increase pollution in a given area. Especially for particularly large dams, this is an element that must be considered during planning.

Pro: Hydro Power is cost competitive

Although the upfront building costs for a hydro power plant can be high, hydro power remains cost competitive. Since the running rivers represent an infinite resource it can continue to produce power as long as the infrastructure is there. Compare that to fossil fuel energy, like that of coal or oil, which are constantly changing in prices. Once built, a hydroelectric power plan has a lifespan of up to 100 years

Con: Hydro Power is expensive to get going

One of the biggest challenges of hydro power is the high costs to build a hydro power plant. Basically, this means hydro power plants must be in operation for a long time before they begin to break even or start making money.

Pro: Hydro Power can promote recreation and tourism

While the environmental impact of a dam is important and should be considered in depth there also comes another benefit! The lake that forms behind the power plant's dam can easily be turned into a tourist and recreation spot. Activities like fishing, boating, swimming, water skiing, will bring crowds of people to enjoy time together. The lake water also serves other practical purposes-like being used for irrigation on local farms.

With irrigation in mind, another benefit of the lakes and dams that result from a hydro power plant is the fact that they act as a water store. This store of water reduces the risk of droughts.

Con: Hydro Power can interrupt nature

When nature is disrupted there is a chain affect that occurs. Being able to slow, control, or stop the flow of water in a river basin that used to flow freely can have a negative impact on the environment. When dams are built, they can cut off the migration paths of certain amphibians. It can also lead to decreased reproduction or even extinction of a species in a given area. Researching how fish migrate is very complex and time-consuming. This makes it difficult to plan for and accommodate.

Taken in part from upliftingmayhem.com/pros-and-cons-of-hydropower/



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74 North Main St

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