

Water Power: Advantages

| Category | Advantages |
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| Environmental impact | <ul style="list-style-type: none"> - Hydroelectric stations and power cables can be installed underground, reducing its impact on the environment. - The dams created for the water station can create a better living environment for some animals and plants. The dams can also stop natural disasters such as floods and erosion. - When creating energy from the waves, there is no damage to the land. - Water power systems use an energy source, water, which is free. This is not like oil which is extracted, bought and sold. - Also, water power systems do not pollute or use up the energy source. The water can be returned back to the river or sea from where it came, unchanged. |
| Public opinion | |
| Economics | <ul style="list-style-type: none"> - Wave energy can offer hope to local towns and villages which are not as well off. It can also give jobs to people. - Every country with a coastline can benefit from wave energy. These countries can use the energy they create and sell it to others. - In comparison to fossil fuel, water power systems are very efficient. A power station fueled by coal or oil runs at only 35% efficiency. |
| Reliability | <ul style="list-style-type: none"> - Wave energy as a source is very reliable as there are always waves moving. Waves are also not affected by the seasons or the weather, they continue no matter what. - Wave energy can keep up with the supply and demand. In the winter when more energy is needed to heat up homes, wave energy is performing at its highest. This also means that the back-up or storage demands are kept to a minimum. - The good thing about water energy is that it can be stored in the hydroelectric power stations. These storage stations are useful when there is a sudden high demand. For example, when there is an ad break in a popular tv series or a sports match, everyone switching on their kettles or stoves calls on a lot of power. This is where the storage station are really important. Fossil fuel stations could supply their power, but at a higher cost. - Hydroelectric power stations take a lot less time to start up than non-renewable power plants. There is a storage full of water ready to flow downhill, and it can start generating energy quickly. - Water is not affected by strikes or political disagreements, unlike coal or oil. For example, the oil crisis of 1973 led the |

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| | <p>government to think about using renewable sources for this reason as they cannot be affected by humans.</p> <ul style="list-style-type: none"> - Water is a concentrated source of power and huge amounts of it can be used in the national grid which powers our country. |
| Jobs | <ul style="list-style-type: none"> - Water power systems offer long term jobs for those who live locally. Unlike coal or oil where remote areas are packed with people who have just moved there for the job, and who then leave after a few years once the energy has been removed. - Making sure that the machinery and equipment is in good shape in water power systems will mean that people will always need to be hired for the job. - With a well-developed plan, water energy could be a key industry, the power and income they would give would be beneficial regionally and nationally. Furthermore, research for this power generation equipment would require the skills of British engineers. Meaning that a lot more jobs could be created and given to them. - Construction of a dam would be a large-scale engineering job, requiring a big work force. |
| Future opportunities | |
| Location and geography | <ul style="list-style-type: none"> - Wave energy is very accessible to many countries. If they have a coastline, they can create and export wave energy. |
| Misc. | |

Water Power: Disadvantages

| Categories: | Disadvantages |
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| Environmental impacts | <ul style="list-style-type: none"> - Water power systems can cause damage to the environment. Building dams, flooding valleys and diverting streams from their natural course create permanent effects on the surrounding area. Most importantly, damming a river or stream, which is a necessity, has an irreversible effect on the long-term ecological balance of that particular environment. This is because you are flooding an already existing ecosystem, creating a pond or lake where there was not one before. You also encourage a buildup of silt, and potentially provide a breeding ground for unwanted pests such as mosquitoes. - Wave generators can have a negative effect on the local marine environment. The noise made from such machinery can interfere with their movement as you are changing the 'soundscape.' |
| Public opinion | <ul style="list-style-type: none"> - The construction of something such as a dam would take long time and consequently cause disturbance over many years. - Wave generators could be a potential danger to shipping and other vessels. - Water power systems may pose as an eyesore for many. This could have an effect on tourism in coastal areas as it may turn away visitors due to the landscape looking ugly or unappealing. |
| Economics | <ul style="list-style-type: none"> - Where the water source is and its location to the power generator is important, and normally is a disadvantage. A waterwheel or a water turbine will never be totally cost efficient as it has to spend some of its energy removing the water it uses from where it flows. There is a lot of potential sources of water which are victim to this problem. For example, a water fall is such a good source as it has a lot of power and could create a lot of energy. However, they are not easy to get to. Waterfalls tricky location means that transporting the power generated to a power station where it is useful would in the end, not make a lot of money. |
| Reliability | <ul style="list-style-type: none"> - Wave energy is sometimes unreliable. There are some days when the waves are not strong enough to produce a meaningful amount of energy. In addition, water in rivers and streams can be affected by the season. For example, dry summer will result in not a lot of energy production. - Although water power systems fuel supply is not affected by human factors such as strikes, they can be affected by droughts and floods, reducing their output. |
| Jobs | |

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| Future opportunities | |
| Location and geography | <ul style="list-style-type: none"> - Although water is a free source, there are a lot of laws and regulations regarding its use. - There are endless laws about the rights of water, which are also very complex. These laws depend on the location, differing from country to country and city to city. Therefore it is difficult for water power to make sure they are legal and correct. - If the supply of where you are getting your water from is small and inconsistent, an expensive dam may have to be built to store water for irregular use. - Transporting water power to the energy centers could spoil the landscape. As this would mean pipes and other gear. |
| Misc. | |