

Eco=Kids Explore  
Hydroelectric Energy  
Running Time: 16:42 minutes

### Program Summary

This program uses live-action video, computer generated images, archival footage, photos and images to help viewers understand hydroelectric power. Young adult hosts, Michael and Andrea give an overview of the history of hydroelectric power. The program uses archival photographs, images and film to show the timeline of the use of hydroelectric power. They focus on the first electric power created by falling water, which was Appleton Edison Electric Light Company. Our hosts then explain how flowing water is generated into electricity by showing how a turbine works. Highlighted are dams and how they work as well as the different functions each part performs in order to provide electricity. The 'home experiment' shows how a dam gathers water and creates energy. The positives and negatives of using hydroelectric power are explained.

### Vocabulary used in this program

waterwheel  
fossil fuels  
nonrenewable  
pollution  
green power  
reservoir  
dam  
penstocks  
turbine

### Questions

1. What is the definition of hydroelectric power?
2. Who is considered the 'father of hydroelectric power'?

3. What are the advantages for using hydroelectric power?  
What are the disadvantages for using hydroelectric power?
4. There are seven parts of a hydroelectric plant. Name them and explain how they work.
5. What determines how much electricity a generator can produce?

For more information to help understand hydroelectric power:

EIA Kids Page: Hydroelectric Energy

[http://www.eia.doe.gov/kids/energy.cfm?page=hydropower\\_home-basics](http://www.eia.doe.gov/kids/energy.cfm?page=hydropower_home-basics)

U.S. Dept. of Energy: Water Power Technologies

[http://www1.eere.energy.gov/windandhydro/hydro\\_basics.html](http://www1.eere.energy.gov/windandhydro/hydro_basics.html)

Hoover Dam and Hydroelectric Power

<http://www.teachersdomain.org/resource/phy03.sci.phys.energy.hooverelec/>