

An Introduction to BPA

May Be Adapted For Any Grade Level

Overview

A representative of BPA will give an explanation of how electricity gets from the river to homes, schools, etc., using an overhead transparency.

- He/she will explain BPA's role in the transmission of electricity.
- He/she will also share details about his/her job at BPA and how it relates to marketing electricity.

Objectives

- To help students understand how electricity is produced by hydro power and how it is transported from the dam to their homes
- To help students understand the role BPA plays in transmitting electricity
- To give the students an opportunity to learn about different jobs or careers at BPA

Materials

For the BPA representative:

- Hydro Power Overhead Transparency-available from BPA Public Information Center
- **Hydro Power: How Electricity gets from the River to Your House** -- BPA pamphlet available from BPA Public Information Center
- Overhead projector

Anything related to your job that would be of interest to students (i.e., Lineman -- helmet, tools, etc.)

For students:

- (optional) **Hydro Power: How Electricity gets from the River to Your House** -- BPA student pamphlet for use with grade 3-5, available from BPA Public Information Center, (503) 230-7334

Getting Ready

Make sure an overhead projector is available and set up. Read through the information on **Hydro Power: How Electricity gets from the River to Your House**. You can use this information when sharing the overhead with the students. The pictures on the overhead follow the same format as the pamphlet. Set up a table in front of the class with any extra materials that you brought to share.

Procedures

Activity 1: Electricity: From River to School

1. Explain to the students that you are from Bonneville Power Administration. Ask: "Does anyone know what BPA does?" This will give you chance to see what they already know.
2. Flip the light switch on and off. Ask: "Do you know where the electricity comes from to light your school? How does it get to your school?" If they do not know, explain to the students that BPA's job is to market and deliver electricity that is produced at federal dams like the Bonneville Dam. BPA is in charge of building, operating, and maintaining the vast transmission system over which the electricity is delivered. We also have programs to help fish and wildlife affected by the dams.
3. Put the transparency on the overhead. You may want to shut off the lights. Tell the students that this picture tells the story of where electricity is produced and how BPA delivers it to your homes. Use the Hydro-Power pamphlet for information as you go through the next steps.
4. Ask: "Can you see where electricity is produced?" (*dam*)
5. Show the students on the overhead where electricity is produced at the dam. Explain briefly what happens.
6. Point out the fish ladder that allows fish to swim around the dam.
7. Next show how it is delivered from the dam to the power lines on huge transmission towers and then to BPA substations.
8. Explain that at the power station or substation, where the electricity is changed to a lower voltage, other companies buy the electricity from BPA. They send the electricity on their own smaller power lines to houses, schools, and other customers.
9. Ask the students if they have any questions about how electricity gets from the river to your school or house. Ask: "Do you know the name of your electric utility?" Explain that this utility company probably buys its electricity from BPA.
10. Share any posters that you brought. The poster, *It's A Magnificent Journey*, shows the life cycle of the Pacific Northwest Salmon.

Activity 2: Your Job at BPA

1. Explain briefly about your job at BPA. Share with the students what subjects you studied in school that help you do your job. (*reading, computers etc.*)
2. If possible, show on the overhead where you work (i.e., Lineman -- power poles; engineer -- designs power poles, etc.) Any time you can connect what you are saying with a picture or an object, it makes it that much more meaningful to kids.
3. Share the things you brought with you. If possible, let the kids pass them around so they are able to see first hand what you brought. (Try a helmet on, look at a map you created, etc.)
4. Ask the students if they have any questions.

Additional Uses for Overhead

The overhead can also be used to discuss BPA's interests in **fish, wildlife and the regional workforce**. BPA is involved in over 100 programs and projects to help protect and enhance fish and wildlife. The transparency shows the fish ladder by Bonneville Dam which allows salmon to migrate to upstream spawning grounds.

The **water cycle** is also shown on the overhead and can be used as a discussion tool.

Additional Resources (to leave with the class)

Pamphlets:

Transmission: How the Power Gets There

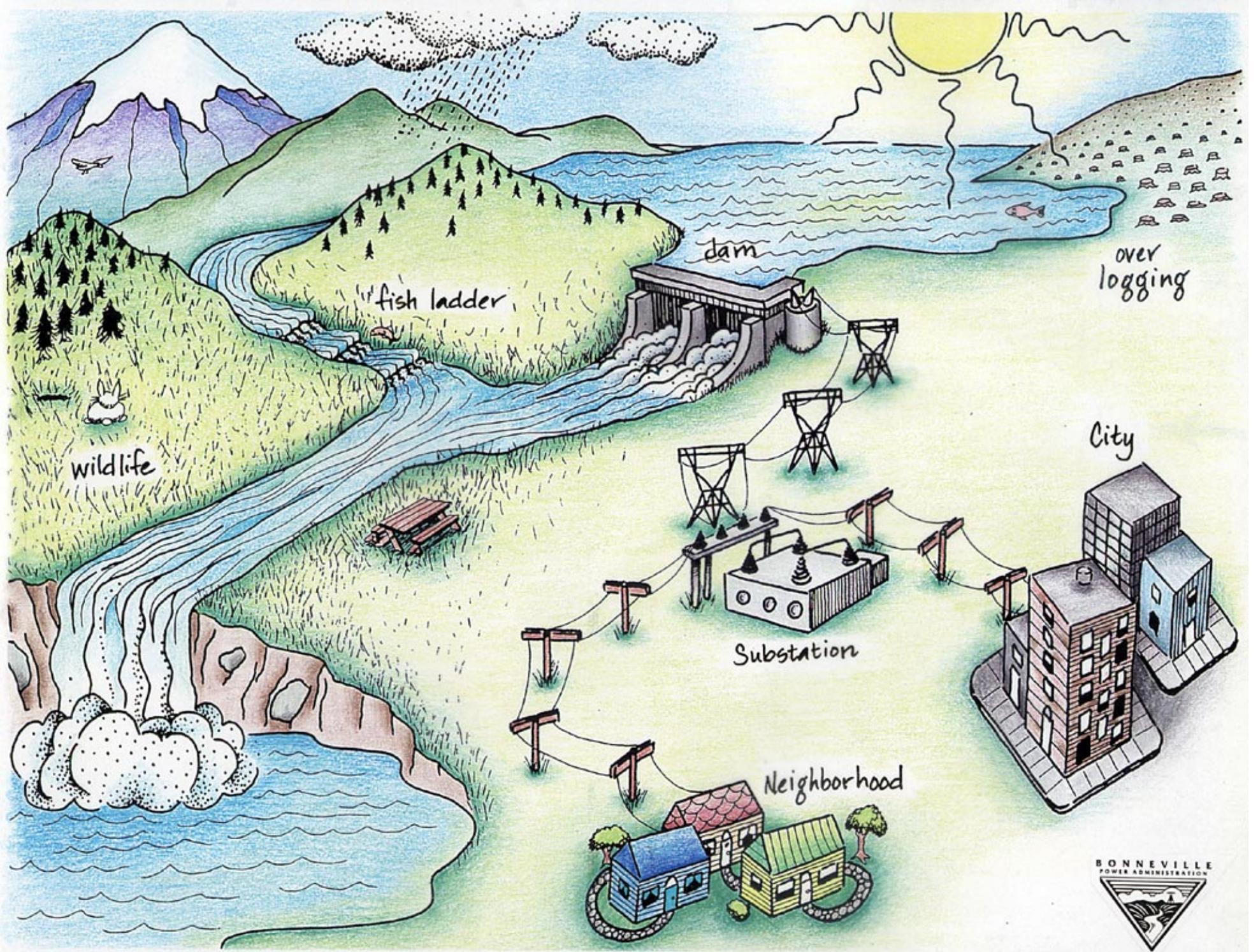
High Powered Energy: The BPA Story

Saving Energy with Zippie, Splash, and Sam N. (grades 1-3)

Posters:

Find Your Future in Education, It's a Magnificent Journey (Life Cycle of the Salmon)

Find Your Future in Education, The Sky Is The Limit (Native American Totem Pole)



wildlife

fish ladder

dam

over logging

Substation

Neighborhood

City

