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**BONNEVILLE POWER ADMINISTRATION  
FOR IMMEDIATE RELEASE**

Friday, Feb. 15, 2013

CONTACT: Joel Scruggs, 503-230-5511  
503-230-5131

**BPA launches Science Lab videos for National Engineers Month**

*Watch and learn: BPA engineers fuse science and fun*

**Portland, Ore.** – The Bonneville Power Administration is launching two new education videos designed to inspire the next generation of scientists and engineers. The videos are part of BPA’s “Science Lab” series that features funny and energetic BPA engineers conducting simple experiments with things you find around the house.

The new episodes are “[How to Build a Turbine](#),” which challenges kids to create their own energy-generating turbine device using paper cups, tape and a shop vacuum; and “[The Great Marble Drop](#),” that tests young people’s ability to design an apparatus that will transport a marble and drop it on a target.

There’s no “right” way to conduct these experiments. Rather, students are challenged to use scientific inquiry and engineering design to solve the problem. “We want kids to work together to devise solutions, test them and then try again,” explains co-host Mike Hulse, who guides viewers through the experiments with the help of fellow BPA electrical engineer Kellie Robinson. The ability to study a problem, develop a hypothesis and test and refine a solution is at the heart of many engineering and scientific careers.

BPA produces its Science Lab videos to connect students to science and engineering. Recent statistics show that science and engineering jobs are growing at twice the rate of non-technical careers, but that only 4 percent of high school freshmen are going on to graduate from college with those degrees.

“Math and science are important building blocks for young people interested in pursuing a career in the energy industry or other technical fields,” says BPA Administrator Bill Drummond.

The video series, which BPA launched with its “[How to Build a Motor](#)” video in 2010, illustrates electricity-related phenomenon such as electromagnetism, and kinetic and mechanical energy. They also provide a steady diet of the scientific and engineering method— try, test, fail and try again. The videos can be used by middle and high school teachers in class, or teachers can watch the videos and duplicate the simple, hands-on

experiments in class. The series also targets kids and parents who are looking for experiments to do at a science fair or at home.

Simplicity and fun are hallmarks of the videos. The experiments call for basic supplies found around the house such as batteries, magnets, tape, wire and the occasional appliance like a shop vacuum set to blower mode. And viewers have responded to the enthusiasm and personality Kellie and Mike bring to performing the experiments. One YouTube viewer commented, “I’m going to be trying this with my kids as soon as I get home. To be honest, I’m a little jealous of your job!”

Robinson says the best part is attracting new talent to the field. “We love our jobs and we want kids to see that engineering and science-based careers can be lot of fun.”

As the biggest power marketer in the Northwest and operator of about 75 percent of the region’s high-voltage transmission system, BPA recognizes that our smart energy future rests on the shoulders of the next generation of engineers, designers and scientists. “We need the next generation to be equipped with the skills to design new applications and technologies essential to operating a smarter, more sophisticated electric power system,” adds Drummond.

The new videos were posted as part of a soft launch in August and have a few hundred views. The original Science Lab video, “How to Build a Motor,” has over 5,000 views. BPA expects to release a new Science Lab video later this year.

BPA funds activities and a variety of programs that support science, technology, engineering and math, often called STEM education. To learn more about the agency’s educational materials and programs, or to request an in-class presentation, visit BPA’s [Community and Education Web page](#) or contact education coordinator [Christy Adams](#).

February is National Engineers Month, and BPA and other organization have teamed up with Business Education Compact to promote STEM education through classroom and hands-on experiences. Visit [www.becpdx.org](http://www.becpdx.org) to learn more.

*BPA is a nonprofit federal agency that markets renewable hydropower from federal Columbia River dams, operates three-quarters of high-voltage transmission lines in the Northwest and funds one of the largest wildlife protection and restoration programs in the world. BPA and its partners have also saved enough electricity through energy efficiency projects to power four large American cities. For more information, contact us at 503-230-5131 or visit [www.bpa.gov](http://www.bpa.gov).*

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**Bonneville Power Administration**  
905 N.E. 11th Avenue, Portland, Oregon 97232  
**Mailing Address:** Media Relations - DKPM-7, P.O. Box 3621, Portland, OR 97208-3621  
**Phone:** (503)230-5131 **FAX:** (503) 230-4019 **Web Site:** [www.bpa.gov](http://www.bpa.gov)