

Top of the News

Drones have arrived at the Intermountain Generating Station. *Food for Thought* considers “vampire load.” Don’t miss the IPA Annual Meeting December 1 at the Grand America Hotel. An original participant in the Intermountain Power Project is exiting. Say hello to “IPP Renewed.” Plus *Energy Items of Interest* from the worlds of coal, electricity and power technologies.

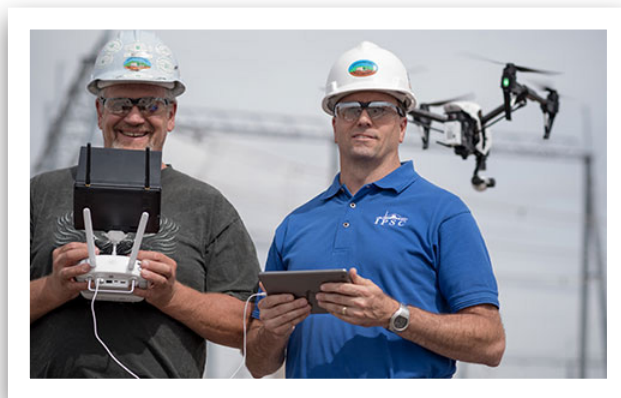
SAFETY SHARE: [It can wait](#). AT&T DriveMode is a free app that will automatically reply to phone calls or messages while you’re driving with a customizable response. [Visit the website](#) for more features, including parental controls and notifications, and an opportunity to join millions of others who have pledged to avoid distracted driving.

Featured This Edition: Drones at IPP

Adopting new technologies to improve power plant maintenance and operations has long been a hallmark of the Intermountain Power Project. Today, that spirit of innovative thinking is taking to the air.

Intermountain Power Service Corporation recently started an Unmanned Aerial Vehicle (UAV) Drone Inspection Program. The purpose of the program is train a specialized group of IPSC personnel to do preliminary unmanned aerial inspections of elevated and hard-to-reach equipment, site aerial surveys, and future boiler furnace inspections as obstacle-avoidance technology improves.

The UAV Inspection Team is comprised of several sets of inspection coordinators and observers, drone pilots, and camera videographers. Team members are selected from all disciplines of IPSC, including operators, mechanics, engineers, and supervisors. One team member is already a licensed FAA pilot, and IPSC is in the process of applying for the FAA Section 333 exemption status for government and commercial operation.



Scott Holman, Utility Technician and Steve Boardman, Lead Electrical Engineer

At the heart of the inspection program are two DJI drones: the Inspire 1, and the S900 model UAVs. The smaller Inspire 1, equipped with a first-person-view camera and a second gimbaled camera with separate remote control, is used for flight training and general inspections by pilots and videographers. The larger DJI S900 is also equipped with dual cameras and dual remote controllers, as well as an infrared camera for detecting problems such as electrical hot-spots and roof leaks. It will also serve as a heavy-lift platform for other sensors and detectors as they become available for use.

One project that is under engineering study and development right now is the aerial elevation surveying of the ash and sludge recycle basins. It is anticipated that a UAV drone equipped with range distance sensors and flying a GPS guided pattern can be used to determine the actual and remaining capacity of such basins, which will help to meet the required reporting regulations.

While the UAV Inspection Program is still in its infancy, the potential uses and benefits of the program are just beginning to be discovered and put into practice. It is anticipated that the program will save time and money as experience and results are acquired and the program begins to pay dividends.

Food for Thought

Lots of modern appliances and electronics consume electricity even when they're not being used. Often referred to as "vampire" or "idle" load, this phenomenon is [low hanging fruit](#) for energy conservation. The Natural Resources Defense Council [estimates the cost](#) of idle load at \$19 billion per year in the United States alone.

IPA Updates

Intermountain Power Agency's Annual Meeting will take place Tuesday, December 1, 2015, at the Grand America Hotel in Salt Lake City. A business meeting for IPA representatives will kick off at 9:30 a.m., followed by a general meeting at 11:00 a.m. A luncheon following the general meeting will feature keynote speaker Val Hale, Executive Director of the Utah Governor's Office of Economic Development.

An original participant in the Intermountain Power Project is exiting concurrent with the execution of revised Organization and Power Sales Agreements that are now being completed as part of the "Renew IPP" project. Utah Power & Light (PacifiCorp) was the only investor-owned utility to participate when IPP was conceived in the 1970s. The company's original 25 percent entitlement share in the Project was scaled back to 4 percent when the Project was resized from four units to two in the 1980s. PacifiCorp is now transferring its 4 percent entitlement share to Los Angeles Department of Water and Power, barring any unexpected objection and following the expiration a sixty day time period.

IPP *Renewed* →

“Renew IPP” is now “IPP Renewed.” With project participants working through the final stages of executing the Second Amendatory Power Sales Agreements that have been approved after several years of negotiation, attention is now turning to the subscription process that will define the size and make-up of future power generation to be constructed at the IPP site. Accordingly, a new campaign logo celebrates “IPP Renewed” as project participants undertake the next phase of planning

Energy Items of Interest

- *Deseret News* published a series of articles examining the future of Utah coal. Stories looked at [community impact](#), [changing attitudes](#), [history](#), and [prospects](#) for the future.
- *SNL* examined “[California’s Quiet Market for Coal.](#)”
- China has been using up to [17 percent more coal a year than previously reported](#), which means that almost a billion more tons of carbon dioxide is being released annually. Meanwhile, construction of coal-fueled power plants in China continues at a [mind-boggling pace](#), causing concern that not all of the plants are needed.
- The monthly natural gas share of total U.S. electricity generation [surpassed the coal share](#) in July for the second time ever. EIA’s [Monthly Energy Review](#) preliminary statistics for the first six months of 2015 showed U.S. primary energy consumption totaled 49 quadrillion BTU, which was virtually unchanged from the first six months of 2014. Natural gas and nuclear electric power consumption each increased 3 percent, and petroleum consumption increased 2 percent. Renewable energy consumption decreased 2 percent, and coal consumption decreased 13 percent.
- [POWER magazine reported](#) that “Despite media headlines and coal industry hand-wringing, reports of coal’s death have been greatly exaggerated...” Penn State’s Frank Clemente wrote: “Make no mistake, [the age of coal marches on.](#)” U.S. Energy Information Administration predicted [coal usage in 2016 will equal this year](#) despite coal plant closures.
- *Inside Energy* considered [reliability impacts](#) of decreasing coal fueled electricity generation.
- Compressed Air Energy Storage [garnered attention](#) for the City of Burbank and is one of several non-battery energy storage technologies [under development](#).
- Those curly light bulbs and Energy Star appliances are saving lots of energy, and ever increasing home sizes are [wiping out those savings](#), said the Pew Research Center.
- Energy Innovation, a San Francisco climate change policy think tank, launched an online [Energy Policy Simulator](#) that allows users to tweak a staggering array of policy options for reducing greenhouse gas emissions to evaluate their costs and effectiveness.

- The U.S. Department of Energy published its second-ever [Quadrennial Technology Review](#), surveying research and development challenges across the energy world.
 - *Washington Post* published [colorful maps](#) showing how electricity is generated in the U.S.
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Learn more about Intermountain Power Agency, please visit: www.ipautah.com

PowerLines is a publication of Intermountain Power Agency. The Intermountain Power Project includes a two-unit coal-fueled generating station located near Delta, Utah, two transmission systems, a microwave communication system and a railcar service center, all built as a joint undertaking by 36 utilities in Utah and California.