

## **DC Microwave Analog Spur Replacement and SONET Ring**

This project will complete the analog to digital transition on the #DC Synchronous Optical Network (SONET) communications system. The #DC SONET system connects substations between Spokane and the Columbia substation to the BPA digital backbone. This project will install digital microwave radio paths from VHF sites that were not included in the initial fiber system build to nodes on the #DC SONET ring. The project will also install new fiber optic cable between Spokane and Boundary substation to build a new SONET ring (partially over SONET radio) north of Spokane to Boundary Sub. After the digital systems are in place, the circuits will be re-routed from the analog system to the digital system. The majority of the circuits can be re-routed directly to the digital system. Remedial Action Scheme (RAS) and Transfer Trip (TT) circuits require that new TT and RAS equipment be installed to be compatible with digital communications. Upon completion of this project, the existing analog system will be retired.

This project is a key component of the sustain program strategy for Power Systems Control (PSC) and telecommunications modernization. Because analog microwave radio is no longer supported, BPA will only be able to keep the system operational for a limited amount of time. Additionally, terminal equipment is no longer being manufactured with analog communication ports. When that aging terminal equipment fails, there will be no replacement equipment available that will be compatible with the BPA analog communication system.