EIOC East Control Room (photo: PNNL)

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The Electricity Infrastructure Operations Center
Pacific Northwest National Laboratory
Support for Continuity of Operations

Energy operations continue to become more and more complex with the introduction of new technologies, new generation sources, and an aging infrastructure begging for more effective and efficient ways to reliably deliver the nation's need for energy.

The Electricity Infrastructure Operations Center (EIOC), located at Pacific Northwest National Laboratory's Richland, Washington campus, is a ready-resource, designed with heavy influence from our industrial collaborations and research experience, and with a vision generously supported with major investments by both DOE-OE and PNNL, to create a rich, configurable control room environment that is world-class.

EIOC West Control Room (photo: PNNL)

The EIOC has two, independent control room environments, tied together with a dedicated network and server enclave, operated apart from PNNL's enterprise network, with its own externally facing, firewalled, high-bandwidth fiber internet connection.

Having our own Authority To Operate (ATO) allows us to make network configuration changes, without being tied to inflexible corporate enterprise policies. Our server enclave is host to volumes of grid data, both real and synthetic, with secure data storage and curation. The EIOC supports the nation's energy research needs as a one-stop technology pipeline, developing and evaluating new technologies and approaches in a safe and configurable, yet structured environment.

The EIOC can support continuity of operations or as a control room for utilities and hosting incident management and emergency response teams for government operations (i.e., response to natural and man-made disasters, including cyber), creating a multi-state, regional, national, or international emergency operations center for enhanced situation awareness, providing connections to data streams and information sources, including an ability to segregate sections of the operational space.

This unique resource exists now and can be used to evaluate relevant analytical and learning tools before an emergency, and PNNL is ready to explore how it might be used as a vital resource during a real energy emergency.