

NEWS RELEASE

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California ISO Wins Award for Technology Innovation

Google Earth Mapping System Helps Manage Wildfire Threats to the Grid

(Folsom, CA) The California Independent System Operator Corporation (California ISO) accepted an award this morning for its innovative use of technology to help manage California's high-voltage grid during wildfires. Utility Automation & Engineering T&D, an energy industry magazine gives Project of the Year awards in four categories to honor companies that find new ways to use technology to benefit themselves and the energy industry as a whole. The California ISO won in the Geospatial Technology category.

Wildfires can pose a significant threat to high-voltage transmission lines. Knowing where a fire is burning in relation to the lines is critical. The California ISO developed a system that merges four different information sources into one composite display to help manage the grid during fires. Google Earth's satellite mapping system is overlaid with data that shows precisely where transmission lines are located in California. The system then blends in weather data—including temperature, humidity, wind speed and direction. The final piece is real-time information from California fire services that pinpoints active fires.

"With all four information streams merged onto one screen, we know where a fire is, how close it is to our lines, and we have a pretty good idea of how fast it's moving and in what direction," said California ISO Director of Grid Operations Jim McIntosh. "Our guys put this together over several months last spring and it really helped during the Southern California firestorms in October (2007)."

The fires in Los Angeles and San Diego forced outages on several key transmission lines. The Southwest Power Link running between Arizona and San Diego was out for several days and other lines were also tripping in and out of service on a minute to minute basis due to smoke, soot and ash that can

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foul the insulators. "It was absolutely imperative to have good information about the changing threats to the lines that were still in service," said McIntosh. "The system we developed delivered the information we needed to decide how to manage power flows and even to request fire retardant air drops in critical locations to protect threatened lines. It helped us keep the lights on."

While some of the data inputs to the system are proprietary, the concept of merging local grid, fire and weather information onto the Google Earth platform could be duplicated by other grid operators. "Out of all the nominations we received in the geospatial technology category, we felt the technology that the California ISO has implemented was the most innovative and could potentially have the greatest benefit to the power industry as a whole if it were to be implemented on a grander scale in the future," said Editor Steven Brown from Utility Automation & Engineering T&D.

Several California ISO employees share the credit for developing the system; Lead Operations Support Specialist Steve Gillespie, Operations Support Specialist Brian Murray, and from the Information Technology group, Critical Systems Lead Eric Mscichowski, Senior Engineering Specialist Devin Miroy, Senior Engineering Specialist Jim Hiebert and Engineering Specialist Tim Willenberg.

The California ISO is a not-for-profit public benefit corporation charged with managing the flow of electricity along California's open-market wholesale power grid. The mission of the California ISO is to safeguard the reliable delivery of electricity, and ensure equal access to 25,000 circuit miles of "electron highway." As the impartial operator of the wholesale power grid in the state, the California ISO conducts a small portion of the bulk power markets. These markets are used to allocate space on the transmission lines, maintain operating reserves and match supply with demand in real time.

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