

Energy Currents

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GIS for Energy

More Nontraditional GIS Solutions for Utilities

Case Study—

Truckee Donner Public Utility District

GIS has been a strong management tool for large utility companies. Until recently, many small utilities have been hesitant to incorporate a GIS because they believe that, at the small business level, GIS is not cost-effective. However, Ian Fitzgerald, GIS coordinator for Truckee Donner Public Utility District (PUD), says that cost was not a significant factor in deciding whether to employ a GIS. Because of government financial support, which most public utility districts and cooperatives can obtain, and the declining cost of GIS software, a utility of small or medium stature can get as much out of a GIS as a large utility without bearing high-cost burdens.

To keep costs down even further, PUD acquired off-the-shelf, utility specific software in which most of the utility solution customization comes right out of the package. In addition, PUD performed much of its own data conversion and customization, which was made possible through the open environment of both ArcFM and ESRI products.

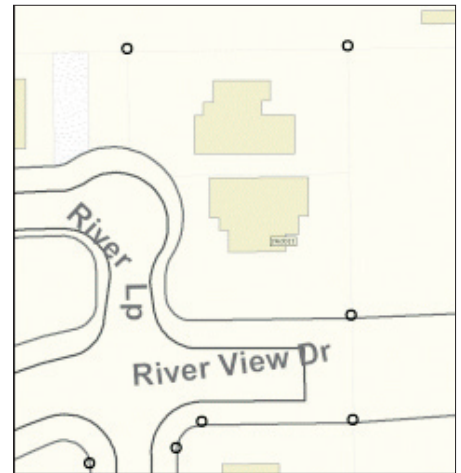
The company uses ArcGIS software and Miner & Miner's ArcFM mapping solutions. As a data entry foundation, PUD uses low-cost yet highly accurate GPS devices to create a parcel basemap that is used by the company, sanitary district, town, county, and regional engineering firms, with two-foot horizontal accuracy, and is the catalyst for current mobile solutions and facility relocation.

PUD is located in California's Sierra Nevada Mountains, not far from Lake Tahoe. Depending on weather patterns, the construction season usually starts about mid-May. During winter the ground is permafrost, but as soon as spring arrives, construction projects begin. Business is fast, and the utility company's GIS actively coordinates efforts by locating joint trenching proj-

ects. The company matches its maintenance and facilities development schedule with other construction agencies such as the California Department of Transportation (Caltrans). If Caltrans is widening a highway, the utility company uses its GPS/GIS to maintain its facilities and GIS-based design application (Miner & Miner's Designer) to plan new projects during the same time period. By knowing where and when construction will occur, the district can build out its network with reduced costs and labor. As a seasonal town that must build out networks to serve both seasonal residents and vacant lots, this reduction of cost is critical.

Currently, PUD is implementing Tadpole-Cartesia's GO! Sync™ software in conjunction with Miner & Miner's Responder outage management system. GO! Sync will allow the district to seamlessly synchronize its versioned design/as-built geodatabase with its outage management geodatabase. As an area that traditionally gets hit hard with damaging winter storms, the integration of an outage management system with ESRI's geodatabase will not only improve the performance of turning the lights back on but also improve PUD's relationship with its customers.

For the "Small Utility That Could," Truckee Donner PUD, with only 11,800 electric customers, has managed to build an enterprise GIS system, incorporating design, utility analysis, trench management, field mapping, pole management, and now a fully operational outage management system. "An open platform, reduced costs, and better performance have been key drivers for our GIS implementation," says Fitzgerald. "In a small company, the GIS coordinator can really make an impression on other people who eventually will also be using the GIS. If the community is sharing data, costs are further reduced."



Foundational Basemap



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