

# GIS for Smart Grid



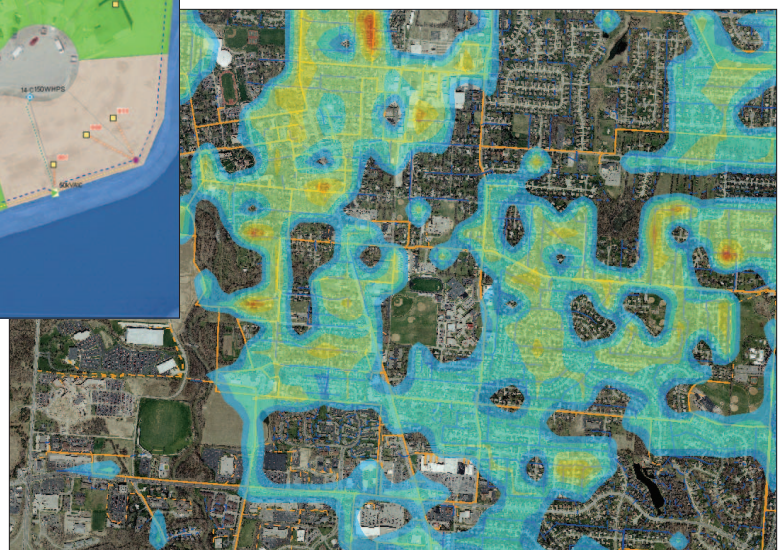
# The Geographic Approach<sup>™</sup> to the Smart Grid

To implement a smart grid, utilities will need the sturdy foundation of geographic information system (GIS) technology from Esri. GIS helps you answer questions and solve problems related to smart grid implementation.

Utility operators will need GIS to make the best decisions about key issues such as collecting data, managing smart meter and sensor installation, analyzing customer behavior, and incorporating renewable energy. When viewed in the context of geography, data is quickly understood and easily shared. Furthermore, GIS technology can be integrated into any enterprise information system framework.

Simply put, GIS makes it possible for utilities to build and operate a smart grid.

## GIS Makes the Smart Grid Smart



### Data Management

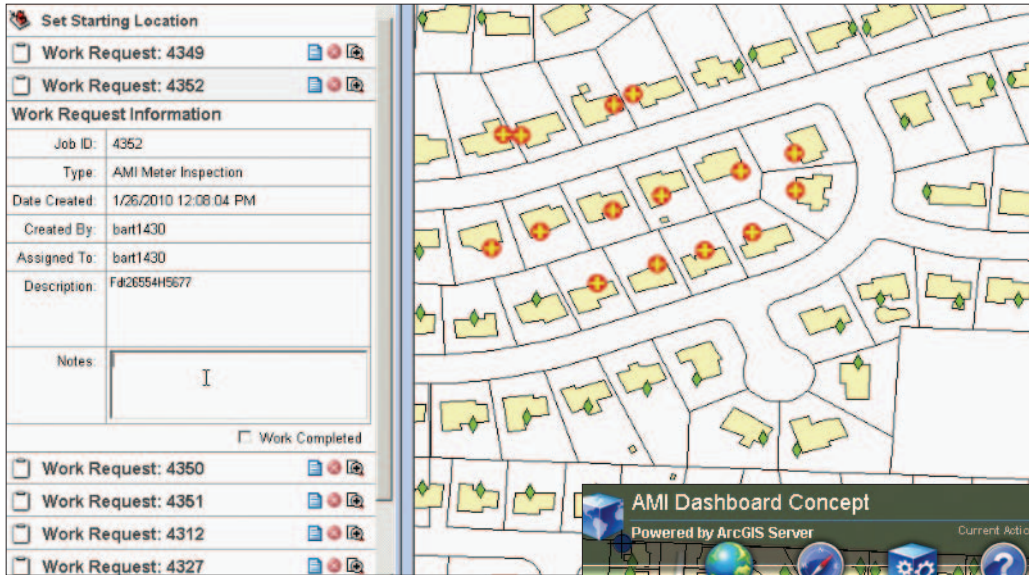
Utilities already rely on GIS to manage assets and outages and map the location of overhead and underground circuits. GIS links utility asset data with customer information to **streamline the rollout of smart grid work orders.**

With GIS, utilities can **capture the mashup of information related to the smart grid**, from customer behavior and the placement of smart meters to the location of electric vehicle chargers and renewable resources. Managing data within GIS ensures the degree of accuracy required for smart grid functionality.

### Planning and Analysis

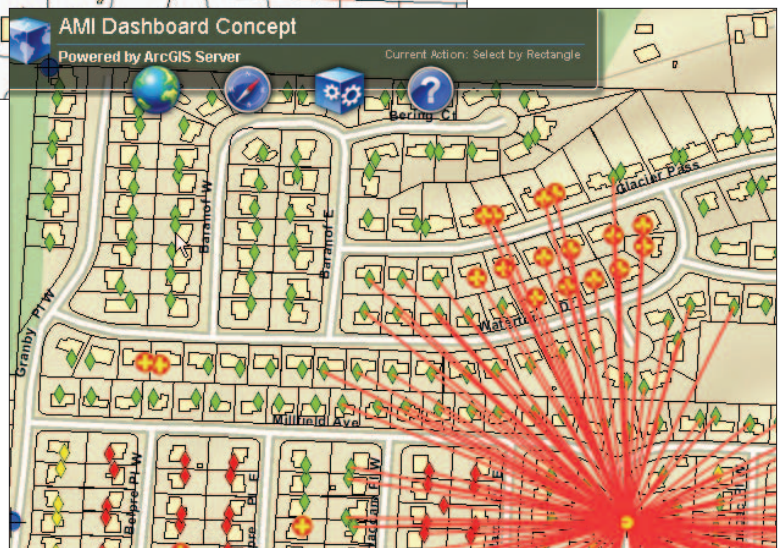
To see whether a smart grid deployment is effective, utilities use GIS to **analyze marketing campaigns** and **study customer behavior patterns** along with demand response. With a rich set of easy-to-use spatial analysis tools, GIS helps **determine the optimal location for smart grid components** such as smart meters, sensors, and cell relays. GIS can also help **identify vulnerabilities**, **weigh asset investments**, and **gauge customer response** to a smart grid implementation.





## Workforce Automation

A smart grid relies on accurate data. Mobile GIS is the surest way to **move data quickly to and from the field and the office**. The productivity of a smart grid implementation can be increased by using GIS to schedule and dispatch utility crews. A GIS allows utilities to monitor the location and status of fieldwork. From the field, crews have access to a set of application templates for recording and reporting the progress of smart grid hardware installation.



## Situational Awareness

Utilities bring it all together with GIS to **view and track smart grid deployment and operation**. Through GIS-based graphic outputs and Web-based reporting, they are able to quickly monitor and demonstrate how the organization is progressing on smart grid activities. GIS provides a Web-based dashboard that **shows the status of any project, alerts staff to variances in the schedule, monitors investments, and locates new work orders**.

Learn more. Read case studies, explore options, and connect with an expert at [esri.com/smartgrid](http://esri.com/smartgrid).



Esri inspires and enables people to positively impact their future through a deeper, geographic understanding of the changing world around them.

Governments, industry leaders, academics, and nongovernmental organizations trust us to connect them with the analytic knowledge they need to make the critical decisions that shape the planet. For more than 40 years, Esri has cultivated collaborative relationships with partners who share our commitment to solving earth's most pressing challenges with geographic expertise and rational resolve. Today, we believe that geography is at the heart of a more resilient and sustainable future. Creating responsible products and solutions drives our passion for improving quality of life everywhere.



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