

Enterprise GIS as the Foundation for the Smart Grid

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Abstrakt

The emergence of Smart Grid technology and intelligent networks can deliver significant increases in energy efficiency by providing smarter energy management. A truly intelligent grid also means a higher rate of return on capital investments and potentially large savings on the operational side for utilities.

The Smart Grid or Intelligent Network also has the potential to provide the ability to dynamically manage the various sources of power on the network allowing for distributed generation to become integrated with the grid. Additionally, as traditional meters are replaced with bidirectional metering, customers can start to realize the benefits from their personal reduction in power consumption through real-time pricing.

One of the clear impacts of Smart Grid implementations today is the need for good asset information and a single network topology. Enterprise GIS is the most dynamic system within a distribution utility and has the role of maintaining a single version of the truth for consumption of the real-time applications that are driving Smart Grid decisions like SCADA, DMS, OMS, and MDM.

The real benefits of GIS are only going to be achieved though the real-time coupling of the GIS to these real-time systems. That implies a significant investment in enterprise GIS and changes in workflow. Additionally, the underlying assumption for this to be successful is for GIS to be treated as a mission critical aspect of the business. As that transition takes place, the real-time applications that drive the smart grid will be able to maximize the use of the most current spatial information.