TOPICs

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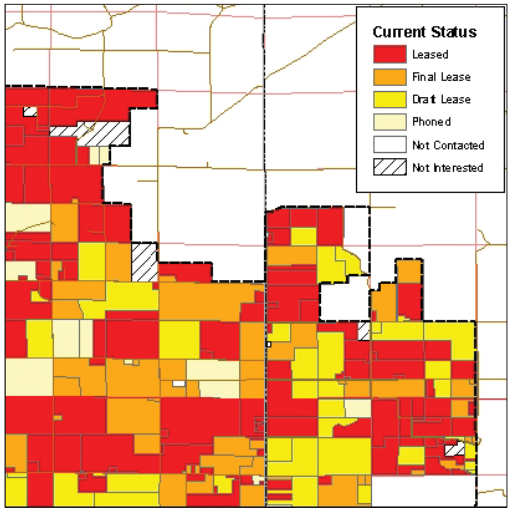
Integrate GIS into Land Acquisition Early to Maximize Value

Imagine modern society without computers. It is becoming just as difficult to imagine greenfield energy development without Geographic Information Systems (GIS). Though GIS is widely used as an analytical tool in land use decisions, its value in the earliest phase of energy development is often overlooked. The use of GIS during right-of-way (ROW) and land acquisition lays a foundation of information that is crucial to analysis and communication throughout the project.

Trained GIS specialists equipped with professional software can create a more useful, lasting product than one derived from common web-based data viewers. Professional GIS involves the layering of a variety of land characteristics and the portrayal of results in a way that written reports or other less complex mapping programs cannot. Factors such as wind speed, land ownership, areas of environmental concern, nearby projects, topography, and existing infrastructure can be easily integrated into one exhibit to develop a strategy for land acquisition.



This map shows parcels color-coded according to lease status and can be easily and quickly updated as negotiations proceed.

Professional GIS can also do much more than portray data on a map. Once a database of land characteristics is in place, GIS can be used to conduct a quick and efficient review of parcels that should be prioritized. A "query" of the database could show, for example, which parcels are greater than 40 acres, have a slope of 2% or less, are not encumbered by a federal crop program, and are located within 20 miles of a transmission line. The results of such queries help project teams refine project boundaries and gauge the anticipated time and funds needed to accomplish acquisition.

Once land acquisition is underway, GIS provides an accurate, up-to-date portrayal of field operations in map form. This bird's-eye view gives the developer an easy-to-read tracking tool; no more alphabetized spreadsheets without clear links to the big picture. Complete landowner information, including the status of negotiations, can be keyed to specific parcels, making adherence to strategies and timelines easy to monitor. GIS allows everyone involved to see exactly what is happening on the ground and expedites the flow of information between field and office. In addition, the GIS database can be used for the life of the project, eliminating the need for multiple information sources and streamlining the transition from acquisition to concept plan design, site review, and due diligence.

GIS is critical to the success of fast-paced ROW and land acquisition efforts, whether it's used to assess development criteria or to track the progress of leasing activity. It enhances the speed, accuracy, and cost-effectiveness of analyses while optimizing communications and laying important groundwork for the rest of the project.

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