

Storm Planning Model

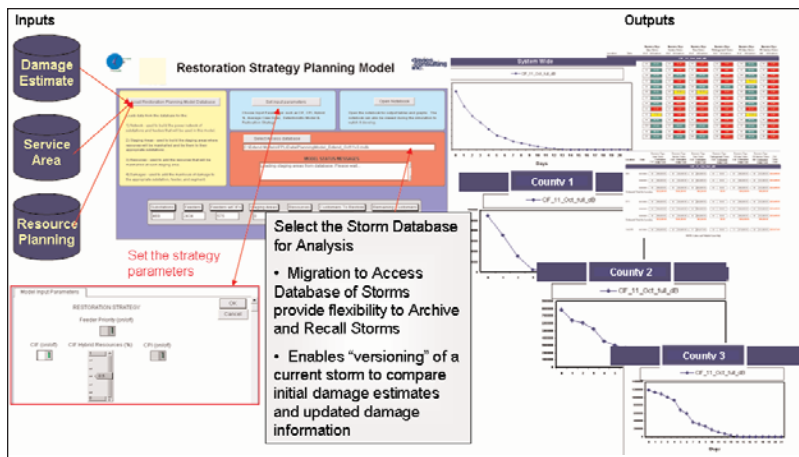
Using a simulation model to make better strategic decisions in storm response and restoration

In collaboration with a major utility facing major storms on an annual basis, DCI developed an innovative simulation model that allows decision makers to evaluate the affect of strategic decisions on storm restoration prior to and after a storm has struck. The model integrates disparate processes and data models into a single solution with the capacity to positively affect storm restoration efforts.

Storms generally occur with some warning. Advances in weather prediction capabilities have improved estimates as to where and, in some cases, how a storm will affect a utility's service territory. For managers, preparing for a major storm requires making key decisions on restoration priorities. These decisions include:

the number and type of outside resources (such as mutual assistance crews and vegetation management contractors) required; the number of service and staging areas to set up; and the most effective means of allocating resources across the utility's service territory to ensure the swiftest restoration possible with the most reasonable costs.

DCI's extensive experience and knowledge of storm restoration, coupled with its in-house capabilities to analyze, model, and bring together disjointed processes and systems, provided a



About Davies Consulting, Inc.

Davies Consulting, Inc. (DCI) is an international strategy and management consulting firm dedicated to working with clients to establish sustainable competitive advantage and deliver superior value to their shareholders and customers.

major utility company with a unique solution to the problem of effectively preparing and planning for storm restorations. In collaboration with the utility, DCI developed estimates of damage using the company's historical storm damage estimate models. Next, DCI integrated logic for service area site selection into the simulation's resource acquisition and allocation process. Through integrating each of these processes and available data, the simulation model allowed the utility's decision makers to adjust the restoration prioritization and resource allocation strategies. Furthermore, the model provided key stakeholders with the ability to evaluate the affect of strategic decisions on key metrics such as system restoration timelines, priority of restoration timelines, utilization of resources and costs associated with storm restoration. Providing this information in graphical and tabular reports allowed for better decision making prior to a storm and during the restoration effort itself.

Using this planning model, the utility discovered that it had traditionally been holding (and paying for) too many resources, without ensuring that all resources were being utilized effectively, during restoration periods. The utility is now changing their decision making process to better schedule resource acquisition and release and save substantial money for its shareholders.

