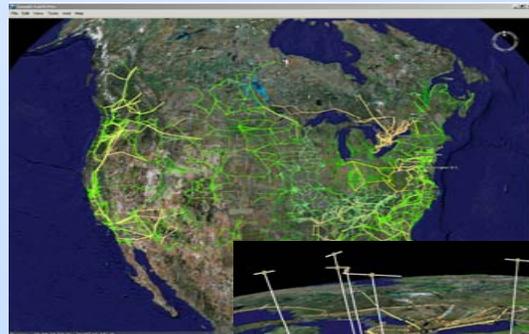


Visualizing Energy Resources Dynamically on Earth

Data Systems Sciences & Engineering Group

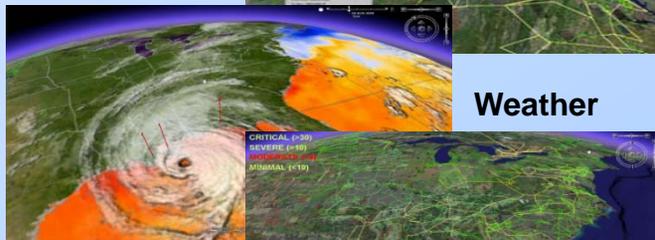
Computational Sciences & Engineering Division



Wide-area
Grid View



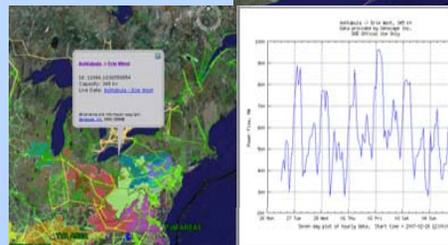
Outages



Weather



Impacts



Streaming
Analysis

- **Problem Statement:**

- Major power outages in the United States over the past decade have the following recurring themes:

- Lack of a wide-area electric grid status view is a key factor that contributes to blackouts
- Lack of a broad predictive view of the grid's state has made managing the preparedness for and response to destructive events extremely difficult

- **Technical Approach:**

- The system ingests data in real-time from various sources (through agreements, open source, established providers, etc.)
- Then the system runs the diverse streaming data through an analysis pipeline
- Finally the outputs are presented in an intuitive spatio-temporal manner valuable to end-users

- **Benefit:**

- Supporting superior grid behavior modeling and simulation capabilities, and coordinated human response will enable greater grid stability

- **Technology Readiness Level 9**

Point of Contact:

Arjun Shankar
(865) 574-2704
shankarm@ornl.gov

