References:

- Oklahoma EOP, ESF-12; Energy Annex
- Exercise Objective 6
- EEG, Task 5.3: Develop protective programs and plans to reduce the general level of risk for the highest risk critical infrastructure/key resources.

Analysis: Energy representatives stated that generation facilities have 24-hour security. There is internal security at other utility facilities where personnel and resources are located. Badges and sign-ins are required to enter company buildings or other areas of importance. Substations and system conductors are provided security on an as-needed basis. Security may be requested through the Oklahoma EOC if a line is down across an interstate or public highway and traffic control is needed. Security for personnel has also been occasionally requested.

Recommendation: None.

Activity 2.6: Measure Effectiveness

Observation 2.6.1: **Strength.** The Oklahoma Association of Electric Cooperatives (OAEC) has designed a system to incorporate weather data and other evaluation criteria to measure program effectiveness.

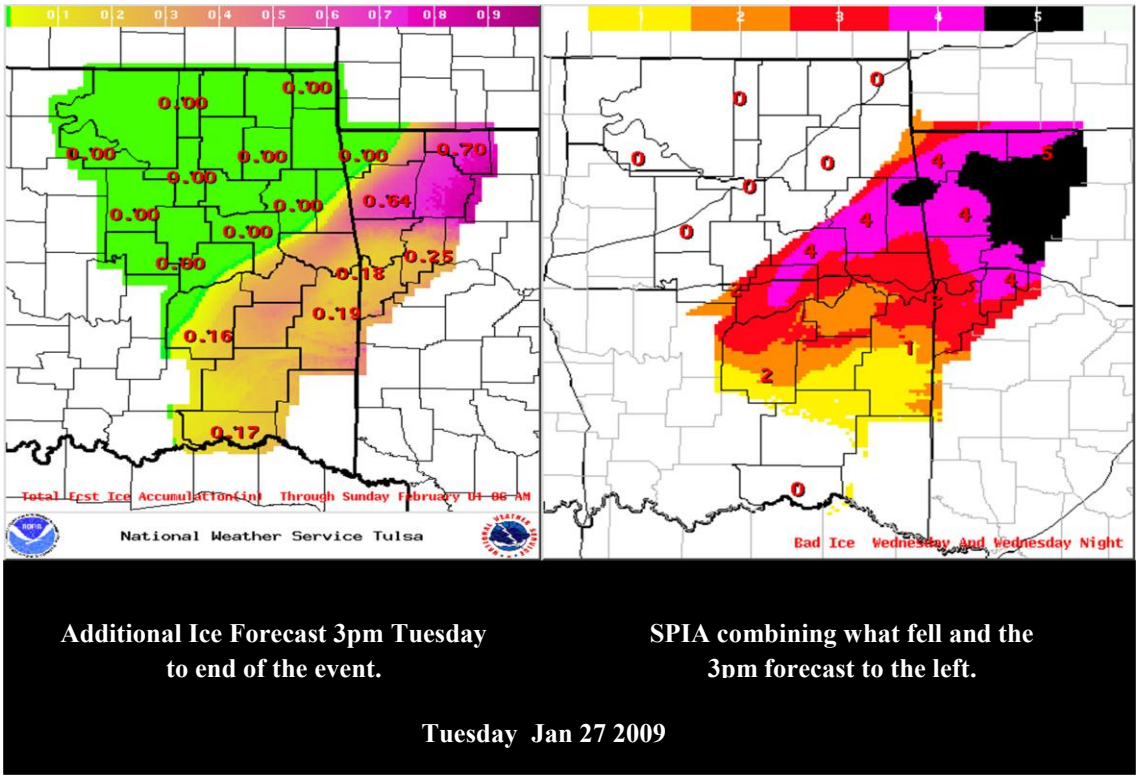
References:

- Oklahoma EOP, ESF-12: Energy Annex
- Exercise Objective 6
- Critical Infrastructure Protection EEG, Task 6.1

Analysis: The OAEC utilizes a computer system, Mesonet (*www.mesonet.org*) , which analyzes weather data provided by the NWS. Real-time weather data is analyzed, interpreted and graphically displayed on a Web page along with access to nine (9) separate real-time radar displays.
This system allows electrical cooperatives sufficient time before a winter storm to identify areas that may be severely affected by ice on power lines and poles. This identification stage allows sufficient time to pre-plan and pre-stage resources in areas that may be severely affected.

Multiple ice storm occurrences over the past 8 years necessitated development of more advanced and sophisticated predictability algorithms. The Oklahoma Climatological Survey (OCS), NWS, and OAEC jointly developed the Sperry-Piltz Ice Index (see **Figure 1**). Using experiences from previous ice storms, they developed an ice accumulation algorithm and subsequent utility damage index to predict both the location and severity of ice accumulation 72 to 96 hours in advance.

Figure 1. Sperry-Piltz Utility Ice Damage Index



The Sperry-Piltz Ice Index allows cooperatives and other utilities to be better prepared by:

- Utilizing advanced targeting of areas likely to receive heavy damage and concentrating repair and reconstruction resources in the most vulnerable areas
- Pre-positioning crews and coordinating in advance with county commissioners, emergency managers, State emergency management officials, and mutual aid entities from across the State or region
- Coordinating materials, purchases, deliveries, and inventories

Recommendation:

8. Explore the feasibility of adopting the Sperry-Piltz Ice Index for use by the National Weather Service (NWS). Place the Sperry-Piltz Ice Index on the U.S. Department of Homeland Security (DHS) Lessons Learned Information System (LLIS) as a best practice for other States to model.