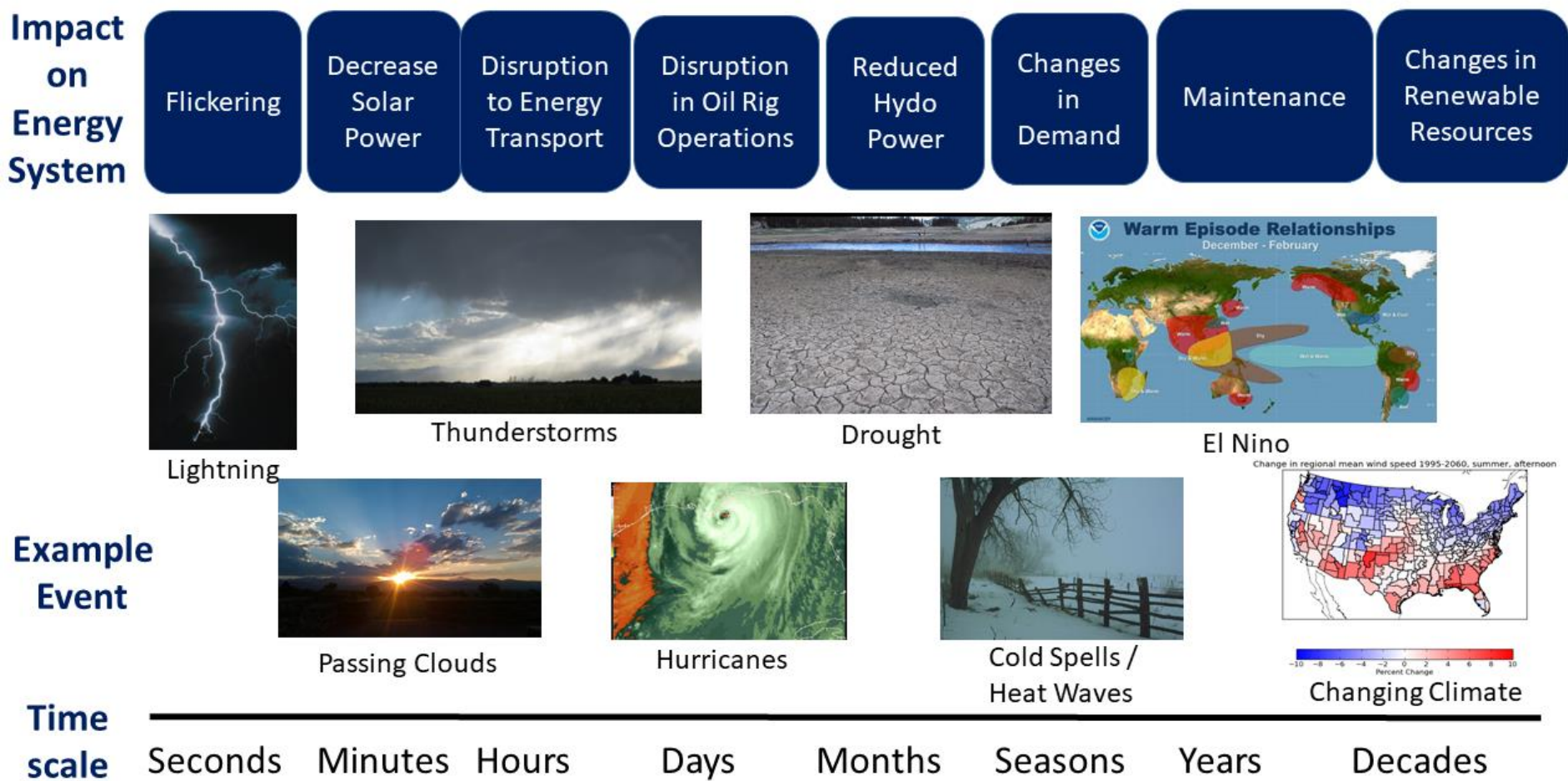
A scenic photograph of a sunset over a mountain range. The sun is low on the horizon, creating a bright lens flare and illuminating the sky with warm orange and yellow tones. The mountains in the background are silhouetted against the bright sky. The overall mood is serene and natural.

# **Meteorology, Climate and the Electric Sector – Forecasting for an Integrated Energy System**

**Sue Ellen Haupt**

**National Center for Atmospheric Research**

# Scales for Forecasting



Lightning



Thunderstorms



Drought



El Nino



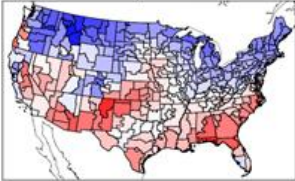
Passing Clouds



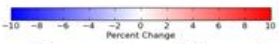
Hurricanes



Cold Spells / Heat Waves



Changing Climate





# Agenda

- **Alberto Troccoli** – World Energy & Meteorology Council
- **Julie Lundquist** – University of Colorado, Boulder
- **Jeff Freedman** – University of Albany
- **David Schweizer** - PJM