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**Processing weather and power grid data using advanced data analytics and
GIS framework**

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Abstract

The weather changes had always a profound impact on power system operation. Lately, the weather changes are more prominent than ever recorded before, and renewable generation is sensitive to weather changes in more direct way than the legacy generation, so more attention needs to be placed on weather impacts. The latest technological development including big data analytics and GIS spatial-temporal representation offer a framework for managing and processing large amounts of weather data, and correlating weather changes to power system operating conditions. The concept of risk assessment of weather impacts is slowly emerging as both planning and operations tool. This presentation addresses the above issues proposing a new framework for real-time tracking of weather impacts on power system operation