

Abstract #: 332

Author Name: Michael Legatt

Author Company: Electric Reliability Council of Texas, Inc.

Second Author's Name:

Abstract Title: When altruism begins at home: Voluntary consumer behavior during energy emergency alerts based on mobile app notifications

Abstract Text:

Since 2012, ERCOT's mobile application has provided smartphone users with the ability to see a high-level view of the status of the Texas power grid, and to receive real-time notifications when ERCOT enters energy emergencies. Given that the residential sector is quite important in overall system load (currently with HVAC and pool pumps, and growing with electric vehicle charging), consumer outreach through multiple paths, including our mobile application, has shown end-users very willing and supportive of changing their own energy behaviors to support the reliability of Texas' bulk power system. The need for communicating with energy end-users is also growing in other grids. For example, in California, high levels of residential solar has lead their reliability coordinator to need to change messages that Californians had been receiving for years. Now, in order to keep base load units online, users are beginning to be asked to shift energy use (e.g., electric vehicle charging, pool pumps, electric dryers) to peak hours so that those plants do not run below their minimum levels. This presentation covers several of the interactions between end users and the bulk power system, and the role that situation awareness and social media can play in showing users they are an integral part of a power grid community, and that the decisions they make do in fact matter a great deal.