Thu 8/22/2019 10:09 AM

McPeck, Michael <Michael.McPeck@nationalgrid.com>

I wasn't on the August 7th meeting call, and most recently received this request to share what actions we've taken at National Grid with respect to resiliency.
Over the last 20 years or so National Grid and it's legacy companies have been impacted by major weather events ranging from Coastal Hurricanes, Northeaster storm events, summertime lightning storms , to winter time storms that include ice and heavy wet snow fall. Northeaster's and hurricanes have related issues of coastal and inland flooding.

In a nut shell, industry standards have changed in the last 10 to 15 years for distribution and transmission systems in our territory to reflect the increase magnification of storms and the frequency of these events (mainly wind and ice loadings to our asset structures). At the bear minimum, we meet these NESC codes for distribution line poles and for transmission structures, and in most cases we exceed the codes to increase our odds of resiliency for our assets.
For flooding situations, we utilize ASCE – 24 and information from the FEMA Firm maps to establish base flood elevation (BFE) levels for 100 year flood events, and we place all critical equipment at substations at or above the BFE +2' or the 500 year flood event, whichever is the higher elevation. In coastal areas we are utilizing the guidance provided to us by the New England ISO, which is BFE +3' for coastal areas which includes the forecasted sea level rise.

Sea level rise is the "new kid on the block" for us, and the models are just developing (a low risk range matches up with historical data for the Boston area, but these levels could increase exponentially with a wide range of conditions). The issue with our substations in coastal areas that are affected by sea level rise, if our stations are protected from the impacts , what's happen to our surrounding neighbors that we service……are communities providing the same level of protection. The question is if communities in these areas will be providing barriers to protect from the sea level rise as the Army Corps of Engineers has done in the past for inland waterways and river systems.

Michael McPeck, PE
Manager, Substation Engineering & Design, Civil/Structural
National Grid
300 Erie Blvd. West
Syracuse, NY 13202
(O) 315 428-5727
(C) 315 420-1528
michael.mcpeck@nationalgrid.com