

BIL – More Than Just a Lightning Strategy

J. David Taylor PE

Engineering Supervisor, Distribution Asset Management
Entergy

Electrical distribution utilities struggle with implementation of outage mitigation strategies. Entergy has implemented a High BIL lightning strategy that has proven to be very effective. Lightning outages are decreasing, so are animal outages on the primary system. Amazingly, so are the “unknown” outages. This presentation will describe how Entergy transitioned to a High BIL strategy, from the initial concept to full implementation. From a High BIL test feeder to a complete overhaul of the Distribution Construction Standards. Then to the removal of Line Lightning Arresters. 300kV BIL can be accomplished with minor changes to most distribution systems. Let’s start the BIL conversation, you will be amazed.

About David

David graduated from Mississippi State University and began working for Mississippi Power and Light as a field engineer in 1985 and was licensed as a Professional Engineer in 1993. David has 34 years of experience in Distribution Design, Asset Planning, and Distribution System Protection Coordination. David’s passion to improve distribution reliability was born when a rash of unexplained outages troubled the Baton Rouge area. By concentrating on the outage causal factors, he determined that the close proximity of ground potential to distribution insulators was a major cause for concern and could represent an easy resolution to problematic outages.

From 1997 to present David has refined the BIL improvement process on legacy construction and has influenced several new construction standards to achieve a high BIL distribution system. In 2010, as part of the Distribution Asset Management team, David worked to institute an Entergy wide “pole by pole” inspection methodology that targets a limited number of worst performing circuits and devices to improve the SAIFI performance at the device level. This “pole by pole” inspection methodology is designed to identify all known potential failures with emphasis on increasing the pole insulation to a minimum of 300 kV BIL. This effort has significantly improved overall reliability of many distribution circuits all over the Entergy system.