



Max Storm™ Overhead Conductors

Standing Against the Storm

Conductors designed for mechanical ruggedness to survive extreme ice loadings and extreme wind events. Designing conductors to withstand heavy ice and wind loads has always been a requirement, but, with extreme weather conditions wreaking havoc across the world, extreme weather conditions are a growing concern for utilities.

In areas such as the extreme north, coastal regions, and water crossings, ice buildup can exceed 1" in thickness. These conditions cause extreme strain on transmission lines resulting in increased sag and tension. To accommodate for the increased sag, transmission towers must be built taller to ensure a safe electrical clearance is maintained between grounded objects and conductors. Taller towers mean higher costs to utilities.

Extreme wind conditions, such as tornadoes and hurricanes, also cause tremendous strain on transmission lines. In recent years, hurricanes, such as Katrina and Maria, have highlighted the humanitarian crises that prolonged power outages can cause and have prompted utilities to put a more intense focus on grid resiliency, which is a combination of storm hardening and better recovery planning.

Southwire's Max Storm™ overhead conductors are utilities' answer to extreme weather conditions. At half the size of the same capacity ACSR conductors, Max Storm™ overhead conductors accumulate less ice buildup, resulting in less sag and less weight on transmission towers. The higher aluminum packing factor reduces the sail area which results in less wind load on transmission lines. Made with high-temperature-tolerant ZTAL aluminum zirconium alloy, an ultra-high strength (UHS) steel core, and mischmetal alloy coating, these conductors are able to withstand higher stringing tensions, extreme heat, and provide the best available corrosion protection. The UHS steel core and strong aluminum alloy result in minimum elongation during extreme load events. This allows for increased electrical clearances and greater safety margins.



Benefits:

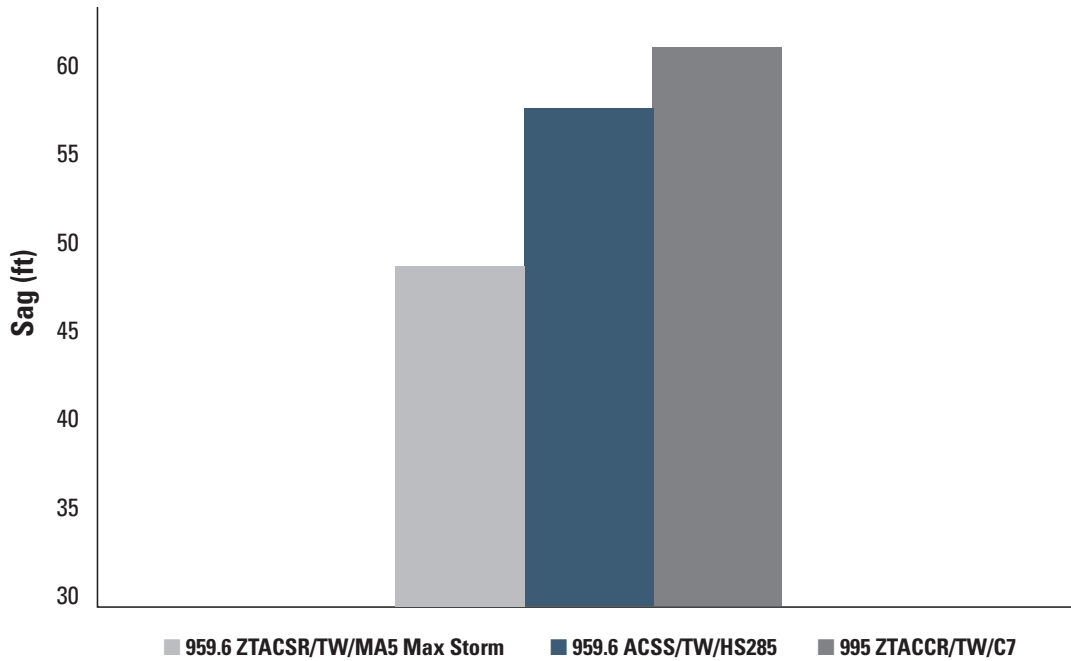
Thermal Ratings: 210°C continuous and 240°C emergency allows for greater capacity than standard ACSR.

Smaller Conductor Size: Max Storm™ overhead conductors are half the size of the same capacity ACSR conductors, resulting in less ice buildup, less sag, and less weight on the towers. The higher aluminum packing factor reduces the sail area for reduced wind load

Same Repair Hardware as ACSR: ACSR hardware and fittings are used for the Max Storm™ overhead conductor.

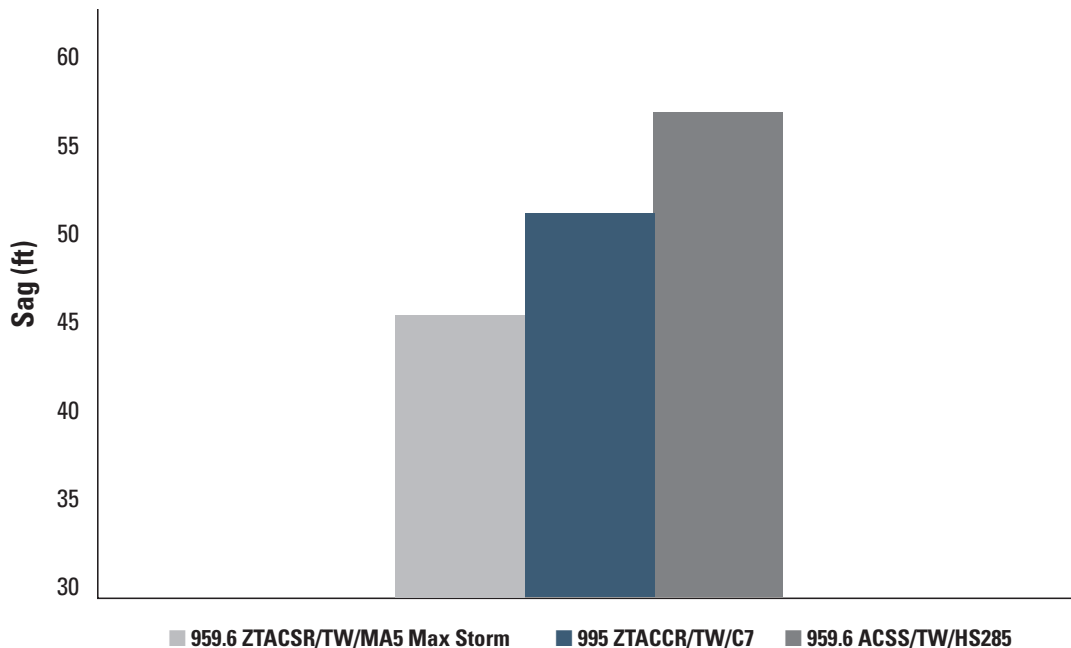
Reduced Tower Height: Tower height and cost can be reduced as a result of Max Storm™ overhead conductors carrying less ice weight or wind load, having less conductor tension, and less load sag than traditional overhead conductors.

Sag Comparison Under NESC +2" Heavy Ice Load – 1200 ft Span



Calculations based upon:
 1200 ft span
 NESC "Heavy" loading district
 40 °C ambient, 2 ft/sec wind
 30 deg N lat
 0.5 emissivity and absorptivity
 June 11, noon
 2012 NESC
 Southwire Certified Data
 (where applicable)

Blow-out Comparison Under 300 MPH Wind Loads – 800 ft Span



Calculations based upon:
 800 ft span
 NESC "Light" loading district
 plus Hurricane wind at 60 °F
 2012 NESC tension limits plus
 80% RBS @ hurricane wind
 Southwire Certified Data
 (where applicable)

