

MDU - Reconductoring - Napoleon to Heskett	Line Length (miles): 11		Voltage (kV): 230
	ACSR_GCC ALSR_GCC-795- TERN_ACSR_GA2_GCC	ACSS_GCC ALSS_GCC-795- TERN_ACSS_MA2_GCC	TS® TS®-819-TS Tern L
Diameter (in.):	1.06	1.06	1.00
Aluminum Area (kcmil):	795.00	795.00	819.16
Rated Strength (lbf):	22100.00	14200.00	49320.00
Weight (lb/kft):	895.00	895.00	849.67
DC Resistance at 20°C (ohms/kft):	0.0217	0.0210	0.0204
Ampacity (A) at Temperature (°C):	Total Peak Operating Amps:1532, Load Factor:0.75, Loss Factor:0.590625		
Ampacity (A) at Rated Operating Temp (°C):	866 (75 C)	1539 (180 C)	1532 (180 C)
Ampacity (A) at Maximum Temp (°C):	991 (90 C)	1623 (200 C)	1615 (200 C)
Peak Power Permissible (MVA)	395	647	643
Wind / Ice or Cold Temperature Sag/Tension	Temperature (°C):-20, Windspeed (mph):39.5, Radial Ice Thickness (in.):1.5', Ruling Span (ft):800:800:800:800		
Maximum Thermal Sag	23.24 Sag (ft): (90 C)	30.71 Sag (ft): (200 C)	14.58 Sag (ft): (200 C)
Maximum Wind or Ice load Sag	28.64 Vertical Sag (ft): (-20 C)	38.38 Vertical Sag (ft): (-20 C)	28.64 Vertical Sag (ft): (-20 C)
Max Total Tower Tension (lbf):	16901	12736	16455
%RTS	76%	90%	33%
Line Losses (11 miles, 1532 Peak Amps)	Load Factor: 0.75 ; Cost of Energy Generation (USD\$/MWh):60; Installed Generation Cost (USD\$/kW):1000		
First Year Line Losses (MWh):	86,356	74,039	72,316
- Line Loss Savings of Conductor (USD\$/ft/Year) over: ACSR_GCC-795-TERN_ACSR_GA2_GCC		\$4.24	\$4.83
- reduces capital cost of Capacity by (USD\$):		\$1,405,987	\$1,602,742
- Reduces 30 year line loss by (USD\$) over: ACSR_GCC-795-TERN_ACSR_GA2_GCC		\$22,166,387	\$25,268,377
- Reduces 30 year CO ₂ generation by (MT) over: ACSR_GCC-795-TERN_ACSR_GA2_GCC		229946	262125