

**Auburn Broadcast Services, LLC
413 Kimberly Drive
Auburn, AL 36832**

December 14, 2017

James E. Price, III
Sterling Communications, Inc.
219 Dodd Road
Ringgold, GA 30736

RE: WELL FM TPO Calculation

Mr. Price,

The transmitter power output (TPO) for the recently installed ERI directional FM antenna was calculated from the values provided in the ERI antenna proof and losses in the transmission lines, connectors and power monitoring systems at the transmitter site.

The following parameters were used in the calculation.

From last page of the ERI proof

Antenna gain = 10.137 (10.059 dB)
Antenna input power = 5.92 kW (for 60 kW ERP)

Transmission Line:

Type is Andrew HJ7-50A
Total Length = 430 feet
Additional losses = .3 dB (mated connectors and power meter)
Line efficiency @ 88.7 MHz = 77.3 % (includes additional losses)

TPO = Antenna input power divided by the line efficiency. There fore

5.92 kW into antenna divided by 77.3 % equals 7.66 kW TPO

If you have any questions, please call.

Terry W. Harper
Consulting Engineer
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