

The TPO of 1.26 kW was calculated as follows:

82.3 meters of Andrew HJ5-50 7/8" Heliax was employed. According to the manufacturer, this line has 1.1385 dB loss per 100 meters, giving a total line loss of 0.9369 dB for a calculated efficiency of 80.4%.

Based on the manufacturer's specifications, the maximum power gain of the installed Shively 6813-3R is 2.575. Therefore, this antenna requires an input of 1.0097 kW to produce 2.6 kW ERP. The transmitter output power is calculated below.

$$\text{TPO} = 2.6 \text{ kW [ERP]} / (0.804 \text{ [Line efficiency]} * 2.575 \text{ [Antenna gain]}) = 1.26 \text{ kW}$$

Doug Vernier