KADQ-FM Evanston, WY
Transmitter Power Output Calculations

TPO Calculations:

$$TPO = \frac{Effective\ Radiated\ Power}{(Antenna\ Power\ Gain * Feed\ System\ Efficiency)}$$

Antenna Power Gain:

Antenna: Nicom BKG77
       Polarization: Circular
       Power Gain: 0.47 x

Feed System Efficiency:

Feed Line to Antenna:
       Type: Andrew LDF5-50
       Length: 60 ft
       Insertion Loss: 0.22 dB

Filter/Combiner:
       Type: Nicom FPB5000
       Insertion Loss: 0.4 dB

Total Losses = 0.62 dB
Feed System Efficiency = 86.65 %

$$\frac{1.2\ kW}{(\ 0.47 * 86.65\%\ )} = \textbf{2.95 kW TPO}$$