

# TPO Calculation Summary

## Auxiliary Antenna Operation

Call letters: KJNW(FM) Auxiliary  
City of License: Kansas City, MO  
Frequency: CH203C1 (88.5 MHz)  
File No: BXPED-20140430ABP  
Facility ID: 8401  
Applicant: University of North Western St. Paul

Operating Effective Radiated Power (ERP): 3.100 kW

Antenna Make: Electronic Research Inc. (ERI)

Antenna Model: LPX-2E-HW

No of Elements: Two (2)

Antenna COR AGL: 115 meters AGL

Antenna COR AMSL: 394 meters AMSL

Power Gain: 0.702

$\text{Log}[\text{power gain}] * 10 = \text{Antenna Gain: } -1.537 \text{ dB}$

Calculated Antenna Input Power: 4.416 kW

### System Loss Info:

<u>Description</u>	<u>Component Make/Model</u>	<u>Length</u>	<u>Loss</u>
7/8 Inch End Connector	Generic (1 @ 0.02 dB each)		-0.020 dB
Main Antenna Feedline (Tower)	Andrew HJ5-50 7/8" (Air)	(0.347 dB/100 ft) 20 ft	-0.069 dB
7/8 Inch End Connector	Generic (1 @ 0.02 dB each)		-0.020 dB

TOTAL SYSTEM GAIN/LOSS: -1.646 dB

$1 / [10^{(-1.646/10)}] = \text{CALCULATED TRANSMITTER POWER OUTPUT: } 4.529 \text{ kW}$