

# TPO Calculation Summary

## Main Antenna Operation

Call letters: WYBQ(FM)  
City of License: Leesport, PA  
Frequency: CH202A - 88.3 MHz  
File No: BNPED-20071019APD  
Facility ID: 175920  
Applicant: Bible Broadcasting Network, Inc.

Operating Effective Radiated Power (ERP): 0.670 kW

Antenna Make: SWR  
Antenna Model: FMEEDS/1-DA  
No of Elements: one (1)  
Antenna COR AGL: 72 meters AGL  
Antenna COR AMSL: 240 meters AMSL  
Power Gain: 2.662

$\text{Log}[\text{power gain}] * 10 = \text{Antenna Gain: } 4.252 \text{ dB}$

Calculated Antenna Input Power: 0.252 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 7/8" AVA5-50 (Foam) (0.317 dB/100 ft)	277 ft	-0.878 dB
7/8 Inch End Connector	Generic (1@0.02 dB each)		-0.020 dB

TOTAL SYSTEM GAIN/LOSS: 3.334 dB

$1 / [10^{(3.334 \text{ dB}/10)}] = \text{CALCULATED TRANSMITTER POWER OUTPUT: } 0.311 \text{ kW}$