

# TPO Calculation Summary

## Main Antenna Operation

Call letters: W284DF  
City of License: Petosky, MI  
Frequency: 284 (104.7 MHz)  
File No: BNPFT-20171201ADF  
Facility ID: 200459  
Applicant: Macdonald Garber Broadcasting, Inc.

Operating Effective Radiated Power (ERP): 0.250 kW

Antenna Make: Nicom

Antenna Model: BKG77

No of Elements: 1

Antenna COR AGL: 144 meters AGL

Antenna COR AMSL: 524 meters AMSL

Power Gain: 0.47

Log[power gain]\*10 = Antenna Gain: -3.279 dBd

Calculated Antenna Input Power: 0.532 kW

### System Loss Info:

<u>Description</u>	<u>Component Make/Model</u>	<u>Length</u>	<u>Loss</u>
Type N End Connector	Generic (5@0.02 dB each)		-0.100 dBd
Main Feedline (Tower)	RFS LCF114(1-1/4") (0.256 dB/100 ft)	472 ft	-1.208 dBd
Filter Loss	Generic (.3 dB)		-0.200 dBd
Main Feedline (Ground 1)	RFS LCF114(1-1/4") (0.256 dB/100 ft)	30 ft	-0.077 dBd

TOTAL SYSTEM GAIN/LOSS: -4.86 dBd

$1 / [10^{(dB/10)/ERP}] =$  CALCULATED TRANSMITTER POWER OUTPUT: 0.766 kW

**Munn-Reese**  
Broadcast Engineering Consultants  
Coldwater, MI 49036