§ 73.614 Power and antenna height requirements.

(a) Minimum requirements. Applications will not be accepted for filing if they specify less than 10 dBk (100 watts) horizontally polarized visual effective radiated power in any horizontal direction. No minimum antenna height above average terrain is specified.

(b) Maximum power. Applications will not be accepted for filing if they specify a power which exceeds the maximum permitted boundaries specified in the following formulas:

(1) Channels 2–6 in Zone I:

$$\text{ERP}_{\text{Max}} = 102.57 - 33.24 \times \log_{10}(\text{HAAT})$$

And,

$$-10 \text{ dBk} \leq \text{ERP}_{\text{Max}} \leq 20 \text{ dBk}$$

(2) Channels 2–6 in Zones II and III:

$$\text{ERP}_{\text{Max}} = 67.57 - 17.08 \times \log_{10}(\text{HAAT})$$

And,

$$10 \text{ dBk} \leq \text{ERP}_{\text{Max}} \leq 20 \text{ dBk}$$

(3) Channels 7–13 in Zone I:

$$\text{ERP}_{\text{Max}} = 107.57 - 33.24 \times \log_{10}(\text{HAAT})$$

And,

$$-4.0 \text{ dBk} \leq \text{ERP}_{\text{Max}} \leq 25 \text{ dBk}$$

(4) Channels 7–13 in Zones II and III:

$$\text{ERP}_{\text{Max}} = 72.57 - 17.08 \times \log_{10}(\text{HAAT})$$

And,

$$15 \text{ dBk} \leq \text{ERP}_{\text{Max}} \leq 25 \text{ dBk}$$

(5) Channels 14–69 in Zones I, II, and III:

$$\text{ERP}_{\text{Max}} = 84.57 - 17.08 \times \log_{10}(\text{HAAT})$$

And,

$$27 \text{ dBk} \leq \text{ERP}_{\text{Max}} \leq 37 \text{ dBk}$$

Where:

$$\text{ERP}_{\text{Max}} = \text{Maximum Effective Radiated Power measured in decibels above 1 kW (dBk).}$$

$$\text{HAAT} = \text{Height Above Average Terrain measured in meters.}$$

The boundaries specified are to be used to determine the maximum possible combination of antenna height and ERP. When specifying an ERP less than that permitted by the lower boundary, any antenna HAAT can be used. Also, for values of antenna HAAT greater than 2,300 meters the maximum ERP is the lower limit specified for each equation.

(6) The effective radiated power in any horizontal or vertical direction may not exceed the maximum values permitted by this section.

(7) The effective radiated power at any angle above the horizontal shall be as low as the state of the art permits, and in the same vertical plane may not exceed the effective radiated power in either the horizontal direction or below the horizontal, whichever is greater.

(c) Determination of applicable rules. The zone in which the transmitter of a television station is located or proposed to be located determines the applicable rules with respect to maximum antenna heights and powers for VHF stations when the transmitter is located in Zone I and the channel to be employed is located in Zone II, or the transmitter is located in Zone II and the channel to be employed is located in Zone I.

§ 73.615 Administrative changes in authorizations.

In the issuance of television broadcast station authorizations, the Commission will specify the transmitter output power and effective radiated power to the nearest 0.1 dBk. Power