

1 Q. **C-172, Replace Radomes, \$211,700**

2 If primary protection signals are transmitted, please provide a comparison of the
3 reliability of using the microwave system vs. a power line carrier.

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6 A. Both microwave and power line carrier equipment provide comparable levels of
7 reliability; however, there is a strong degree of correlation between power line
8 carrier system failure and transmission line failure, which is when the power line
9 carrier signal is required. Conversely, microwave failure and transmission line
10 failure are negatively correlated. This is because the failure of transmission lines
11 typically occurs in poor weather and icing conditions, when the power line carrier is
12 also experiencing signal degradation or loss. Microwave on the other hand typically
13 experiences signal fading during calm weather in spring and fall. This reinforces the
14 need to ensure that failing radomes will not be the cause of a microwave failure
15 during a storm. In short, power line carrier is likely to fail precisely when it is
16 needed, whereas properly maintained microwave will not.