

22. Incorrect. The answer is false not true. The real capital cost per kWh is $\$_k = \0.0267 per kwh.

$$\begin{aligned}\text{Expected Power} &= E(EI) * 24 * 365 \\ &= 30 E[X] * 24 * 365 \\ &= 30 * [30 (0.05) + 10 (0.45) + 0 (0.50)] * 24 * 365 \\ &= 1,576,800 \text{ kwh each year.}\end{aligned}$$

Total costs are:

$$\$300,000 + \$100,00 = \$400,000$$

The real capital cost per kilowatt hour $\$_k$ is:

$$\begin{aligned}(400,000) &= \sum_{i=0}^{20} [\$_k (1,576,800 / (1+0.10)^i)] \\ \$_k &= \$0.0267 \text{ per kwh}\end{aligned}$$