

19. Incorrect. The answer is false not true. When the discount rate goes up the cost per kwh also goes up but it does not quite double.

The turbine will generate:

$$400 \times 24 \times 365 \times 0.25 = 876,000 \text{ kW per year}$$

Total costs are:

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

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

$$(400,000) = \Sigma(i=0, 20) [\$_k (876,000 / (1+0.20)^i)]$$

$$\$_k = 400,000 / \{ \Sigma(i=0, 20) [876,000 / (1+0.20)^i] \}$$

$$\$_k = \$0.078 \text{ per kwh}$$