

Chapter 6, Solution 1.

$$i = C \frac{dv}{dt} = 7.5(2e^{-3t} - 6te^{-3t}) = \mathbf{15(1 - 3t)e^{-3t} \text{ A}}$$

$$p = vi = 15(1-3t)e^{-3t} \cdot 2t e^{-3t} = \mathbf{30t(1 - 3t)e^{-6t} \text{ W.}}$$

$$\mathbf{15(1 - 3t)e^{-3t} \text{ A}, 30t(1 - 3t)e^{-6t} \text{ W}}$$