

70. (a) The energy stored is

$$U = \frac{1}{2}CV^2 = \frac{1}{2}(130 \times 10^{-12} \text{ F})(56.0 \text{ V})^2 = 2.04 \times 10^{-7} \text{ J} .$$

(b) No, because we don't know the volume of the space inside the capacitor where the electric field is present.