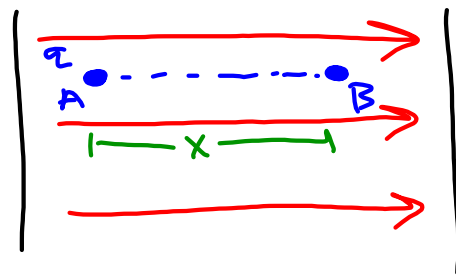


There exists electric potential energy, which is analogous to gravitational potential energy.



$$\vec{F} = q\vec{E}$$

$$\Delta U_e = q (\text{something})$$

$$\Delta U_e = (q)(E)x$$

$\downarrow$  charge  
 $\downarrow$  Electric field  
 $\downarrow$  displacement in direction of E-field

$V \rightarrow$  Electric potential

[units: Volts (V)]

$$\Delta V = - \int \vec{E} \cdot d\vec{r}$$