Electrical Potential Energy.

It is the energy associated with state of separation between charged particles that interact via electric force. For two point charge q_1 and q_2, separated by distance r.

$$U = \frac{1}{4\pi\varepsilon_0} \cdot \frac{q_1 q_2}{r}$$

While for a point charge q at a point in an electric field where the potential is V

U = qV

As charge can be positive or negative, electric potential energy can be positive or negative.