## **RC Circuit: Energy Transfer While Discharging**



Loop rule:  $IR + \frac{Q}{C} = 0$  (*I* is negative)

- $IV_R = I^2 R$ : rate at which energy is dissipated in resistor
- $IV_C = \frac{IQ}{C}$ : rate at which capacitor releases energy

Balance of energy transfer:  $I^2R + \frac{IQ}{C} = 0$ 

