$$E_{end} - E_{saved} = kI\left[E_{saved}\,\rho_{energy} - \frac{1}{kI}\right] - c\,kI \quad \text{Tue MKM}$$

$$E_{end} - E_{saved} = kI\left[E_{saved}\,\rho_{energy} - c - \frac{1}{kI}\right]$$

$$E_{end} - E_{saved} > 0$$

$$E_{saved}\,kI\left[\rho_{energy} - \frac{c}{E_{saved}} - \frac{1}{kI}\right] > 0$$

$$\rho_{energy} - \frac{c}{E_{saved}} - \frac{1}{kI} > 0$$

$$\boxed{\rho_{energy} - \frac{c}{E_{saved}} > \frac{1}{kI}}$$

$I \uparrow$, greater propensity to backfire

$k \uparrow$, greater propensity to backfire