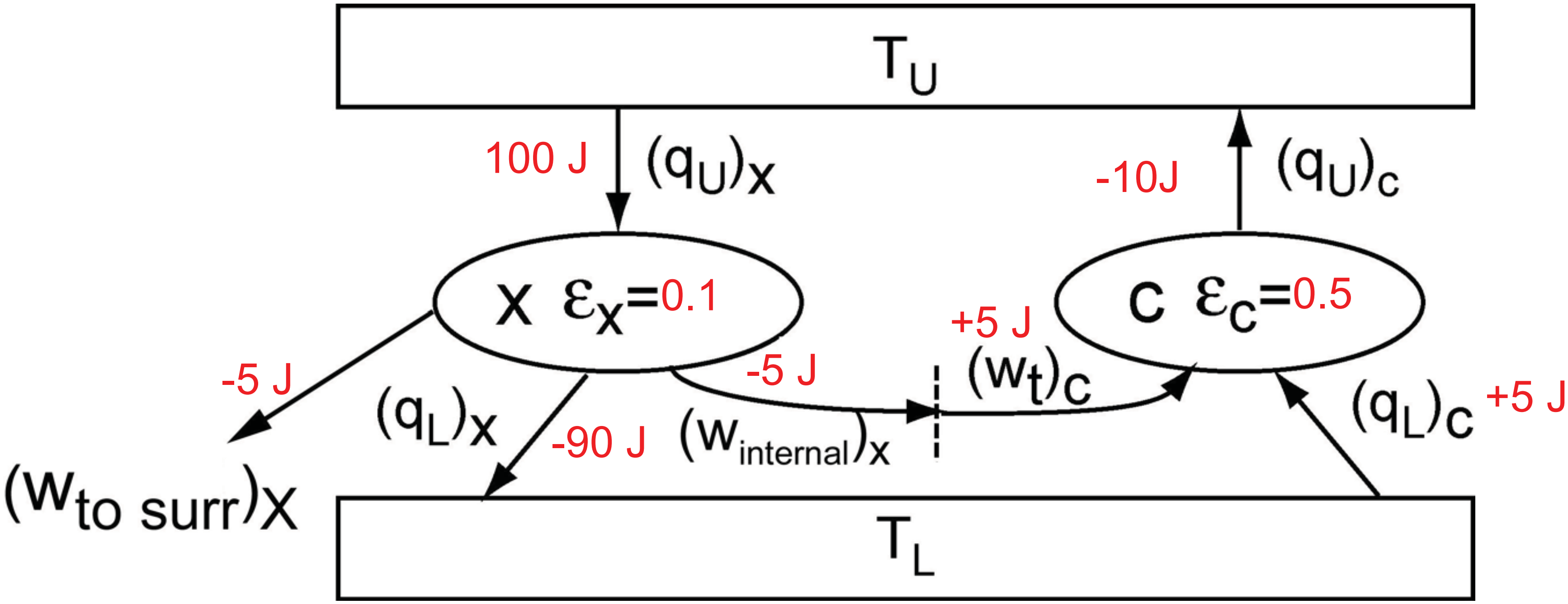
the case: $\varepsilon_X < \varepsilon_C$

given ε_x=0.1, ε_c=0.5, $(q_U)_x$=100J , $(w_{to\ surr})_x$=-5J



net (system): q_U **= +90 J**

q_L**= - 85J**

w_T**= -5 J**

the combination has taken in 90 J at T_U and has given off 85 J at T_L to produce 5J of work on surroundings.
Does NOT violate 2nd Law.