

KE-2

$$q_f = \dot{m}_{\text{kond}} (h_{10 \text{ bar}, 220^\circ\text{C}} - h_{g, 110^\circ, \text{sat}}) =$$

$$= \frac{15000}{3600} (2875 - 461) = 10,06 \text{ MW}$$

Före

$$C_{\text{panna}} = \frac{C_{\text{kol}}}{\eta_{\text{panna}}}$$

Efter

$$C_{\text{CHP}} = \frac{\alpha + 1}{\eta_{\text{tot}}} \cdot C_{\text{bio}} = 0$$

$$C_{\text{pp}} = \alpha \cdot \frac{C_{\text{kol}}}{\eta_{\text{pp}}} \cdot \frac{1}{\eta_{\text{distr}}}$$

$$\Delta C = C_{\text{efter}} - C_{\text{före}} = - \frac{\alpha C_{\text{kol}}}{\eta_{\text{pp}} \eta_{\text{distr}}} - \frac{C_{\text{kol}}}{\eta_{\text{panna}}}$$

$$\Delta C = - \left( \frac{\alpha C_{\text{kol}}}{\eta_{\text{pp}} \eta_{\text{distr}}} + \frac{C_{\text{kol}}}{\eta_{\text{panna}}} \right) \cdot q_f \cdot t =$$

$$= - \left( \frac{0,35 \cdot 327}{0,37 \cdot 0,96} + \frac{327}{0,84} \right) \cdot 10,06 \cdot 7300 = - 52,3 \text{ kton/y}$$