

$$CO_2 = \left[\sum_{i=1}^n (IL_i \times TC_{IL,i}) + \sum_{k=1}^p (M_k \times TC_{M,k}) + (EC \times TC_{EC}) - (F \times TC_F) - (SC \times TC_{SC}) - (R \times TC_R) - (RS \times TC_{RS}) \right] \times 3,664$$