

$$CO_{2,FRD} = \left[ (MIN \times TC_{MIN}) + \sum_{i=1}^n (MP_i \times TC_{MP,i}) + \sum_{j=1}^m (MC_j \times TC_{MC,j}) - (FRD \times TC_{FRD}) - (SNM \times TC_{SNM}) - (R \times TC_R) \right] \times 3,664$$