$$E_{s,CH4} = V_s * X_{CH4} * \left[(1-\eta) * Z_L + Z_U \right] \quad \text{(Eq. W-19)}$$

$$E_{s,CO2} = V_s * X_{CO2} + \sum_{j=1}^{5} \left(\eta * V_s * Y_j * R_j * Z_L \right) \quad \text{(Eq. W-20)}$$