Equation 4.2.2-1 $\dot{Q}_h(T_j) = \dot{Q}_h^{k=1}(T_j) + \frac{\dot{Q}_h^{k=2}(T_j) - \dot{Q}_h^{k=1}(T_j)}{\mathrm{FP}_h^{k=2} - \mathrm{FP}_h^{k=1}} * \left[\mathrm{FP}_h(T_j) - \mathrm{FP}_h^{k=1}\right]$

Equation 4.2.2-2 $\dot{E}_h(T_j) = \dot{E}_h^{k=1}(T_j) + \frac{\dot{E}_h^{k=2}(T_j) - \dot{E}_h^{k=1}(T_j)}{\mathrm{FP}_h^{k=2} - \mathrm{FP}_h^{k=1}} * \left[\mathrm{FP}_h(T_j) - \mathrm{FP}_h^{k=1}\right]$

where the space heating capacity and electrical power consumption at both low capacity (k=1) and high capacity (k=2) at outdoor temperature Tj are determined using

Equation 4.2.2-3 $\dot{Q}_h^k(T_j) = \begin{cases} \dot{Q}_h^k(17) + \frac{\left[\dot{Q}_h^k(47) - \dot{Q}_h^k(17)\right] * (T_j - 17)}{47 - 17}, & if\ T_j \geq 45\ °\mathrm{F}\ or\ T_j \leq 17\ °\mathrm{F} \\ \dot{Q}_h^k(17) + \frac{\left[\dot{Q}_h^k(35) - \dot{Q}_h^k(17)\right] * (T_j - 17)}{35 - 17}, & if\ 17\ °\mathrm{F} < T_j < 45\ °\mathrm{F} \end{cases}$

Equation 4.2.2-4

$$\dot{E}_h^k(T_j) = \begin{cases} \dot{E}_h^k(17) + \frac{\left[\dot{E}_h^k(47) - \dot{E}_h^k(17)\right] * (T_j - 17)}{47 - 17}, & if\ T_j \geq 45\ °\mathrm{F}\ or\ T_j \leq 17\ °\mathrm{F} \\ \dot{E}_h^k(17) + \frac{\left[\dot{E}_h^k(35) - \dot{E}_h^k(17)\right] * (T_j - 17)}{35 - 17}, & if\ 17\ °\mathrm{F} < T_j < 45\ °\mathrm{F} \end{cases}$$