$$\begin{split} g &= q_{s} - q_{v} = q_{s} - q^{t} \\ q_{s}\left(q, t, \alpha, h\right) &= \min\left\{q_{s} : f_{2}\left(q_{s}\right) \geq f_{1}\left(q, t, \alpha, h\right)\right\} \end{split}$$