Objective Function, $Z = \sum_{m,tm} ObjWt(m,tm) \cdot VM(m,tm)$ (1)

$$VM(m,tm) = \sum_{j,i} VIJ(j,i,m) \cdot INV(j,i,tm) + \sum_{j,i,t} VPJ(j,m) \cdot P(j,i,t,tm) + \sum_{r,i,i',t} VQ(r,m) \cdot dist(i,i') \cdot Q(r,i,i',t,tm) \cdot YQ(r,i,i',t,tm) + \sum_{r,i,t} VI(r,m) \cdot abs(IM(r,i,t,tm)) \cdot YIM(r,i,t,tm), \quad \forall r,m,tm$$

Constraints:

Technologies balances

$$N(j,i,tm) = N(j,i,tm-1) + INV(j,i,tm) \quad \forall j,i,tm \quad (2)$$

Flow constraints

$$Q(r,i,i',t,tm) - \frac{Q_{max}}{(PHI(t)/8760)} \cdot YQ(r,i,i',t,tm) \leq 0 \quad \forall r,j,i,t,tm \quad (3)$$

Import/export

$$abs\big(IM(r,i,t,tm)\big) - IM_{max} \cdot YIM(r,i,t,tm) \leq 0 \quad \forall r,j,i,t,tm \quad (4)$$

Mass Balance, $RS(r,i,t,tm) = \sum_{j} MU(j,r) \cdot P(j,i,t,tm) + \sum_{i'} Q(r,i,i',t,tm) - \sum_{i'} Q(r,i',i,t,tm) + IM(r,i,t,tm) \quad \forall r,i,t,tm \quad (5)$