WITNESS Simple

$$minimize \quad obj = \alpha \left[\gamma \frac{discounted\_utility_{ref} * n_{years}}{\sum_y discounted\_utility[y]} + (1 - \gamma) \frac{min\_utility_{ref} * n_{years}}{\sum_y min\_utility_{ref}[y]} \right]$$

$$+ (1 - \alpha) * \left[\frac{\sum_y CO2[y]}{CO2_{ref} * n_{years}} + \frac{\sum_y CO2^{ppm}[y]}{CO2^{ppm}_{ref} * n_{years}} \right]$$

$$\text{w.r.t} \quad invest_{mix}$$

$$\text{s.t.} \quad (Total\_energy\_prod - min\_energy)/energy_{ref} \geq 0$$

(1)