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Sejam E_I energia de Eletricidade usada para iluminação;
e E_{Am} , E_{Ag} , P_{Am} , P_{Ag} , G_{Am} , G_{Ag} definidos similarmente.

Temos:

- $E_I \geq 20$
 - $E_{Am} + P_{Am} + G_{Am} \geq 10$
 - $E_{Ag} + P_{Ag} + G_{Ag} \geq 30$
 - $E_I + E_{Am} + E_{Ag} \leq 50$
 - $P_{Am} + P_{Ag} \leq 50$
 - $G_{Am} + G_{Ag} \leq 20$
- (necessidades)
- (suprimentos máximos)

custo $\propto 50E_I + 90E_{Am} + 80E_{Ag} + 30P_{Am} + 40P_{Ag} +$
 $+ 60G_{Am} + 50G_{Ag}.$

Sendo

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$$C = (50 \ 90 \ 80 \ 30 \ 40 \ 60 \ 50)^T$$

$$X = (E_L, E_{Am}, E_{Aj}, P_{Am}, P_{Aj}, G_{Am}, G_{Aj})^T$$

$$A = \begin{pmatrix} -1 & & & & & & \\ & -1 & & & & & \\ & & -1 & & & & \\ & & & -1 & & & \\ & & & & -1 & & \\ & & & & & -1 & \\ 1 & 1 & 1 & & & & \\ & & & 1 & 1 & & \\ & & & & & 1 & 1 \end{pmatrix}$$

$$b = (-20 \ -10 \ -30 \ 50 \ 50 \ 20)^T$$

0. norma PPL e':

$$\min C^T X$$

$$\text{s.t. } AX \leq b$$

$$X \geq 0.$$