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NOMENCLATURE

N	number of nodes
D_i	energy demand of each node i [MWh]
G_i	energy generation of each node i [MWh]
d	distance of connection between two nodes of the network [m]
A	adjacency matrix of the network
a_{ij}	elements of the adjacency matrix
S_i	energy surplus that characterize each node i
X_{ij}	energy flow exchanged between node i and node j
I_N	network index
$links_{exploited}$	number of links that are effectively exploited for the energy distribution on the urban energy network
$links_{neighborhood}$	number of links of the starting urban energy network and defined through the neighborhood criterion