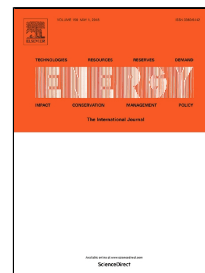


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Nomenclature

Abbreviations

CHP	combined heat and power
BCHP	biomass-based CHP
BGS	biomass gasifier
ICE	internal combustion engine
HOB	heat-only boiler
ES	energy storage
PGS	producer gas storage
TES	thermal energy storage

Symbols

E	electricity demand (kWh)
H	heat demand (kWh)
Z	net acquisition cost (\$)
P	purchase and installation cost (\$)
O&M	operation & maintenance cost (\$/kWh)
C	hourly capital cost (\$/h)
M	rated capacity (kW)
N	expected life (years)
ir	interest rate
s	economic scaling factor
T	length of planning horizon (h)
V	set of all system components that contribute to capital cost
U	set of all system components that contribute to O&M cost
x	decision variable: hourly energy flows (kWh/h)

Superscripts and subscripts

t	time step (h)
p	actual facility
o	reference facility
i	index of installed units that contribute to capital cost

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