Symbol	Variable	Units	Use or assumption
D	Frictional dissipation	$\mathrm{W\,m^{-2}}$	Assumed to be in steady state, with $D = G$
G	Convective power	$\mathrm{W\,m^{-2}}$	Eqs. (1), (3) and (4)
J_{in}	Turbulent fluxes of sensible and latent heat	$\mathrm{W\,m^{-2}}$	Eqs. (1), (2) and (5)
J_{opt}	Turbulent fluxes J_{in} optimized to yield max. power	$\mathrm{W\,m^{-2}}$	Eq. (7)
J_{out}	Cooling rate of the heat engine	$\mathrm{W\,m^{-2}}$	Eqs. (1) and (2)
k	Radiative parameterization constant	$\mathrm{W\,m^{-2}\,K^{-1}}$	Used in linearization of $R_{\mathrm{l,net}}$
$R_{\mathrm{l,out}}$	Flux of terrestrial radiation to space	$\mathrm{W\,m^{-2}}$	Assumed to be in steady state, with $R_{\mathrm{l,out}} = R_{\mathrm{s,avg}}$
R_{s}	Surface absorption of solar radiation	$\mathrm{W\,m^{-2}}$	Forcing
$R_{\mathrm{s,avg}}$	Surface absorption of solar radiation (average)	$\mathrm{W\,m^{-2}}$	Eq. (6)
T_{a}	Atmospheric temperature	K	Assumed to be the radiative temperature
T_{e}	Temperature of the heat engine	K	Assumed to be similar to the surface temperature
T_{s}	Surface temperature	K	–
$\mathrm{d}U_{\mathrm{a}}/\mathrm{d}t$	Change in atmospheric heat storage	$\mathrm{W\,m^{-2}}$	Eq. (6)
$\mathrm{d}U_{\mathrm{e}}/\mathrm{d}t$	Change in heat storage within heat engine (assumed to be the same as $\mathrm{d}U_{\mathrm{a}}/\mathrm{d}t$ in Sect. 2.2)	$\mathrm{W\,m^{-2}}$	Eqs. (1)–(4)
$\mathrm{d}U_{\mathrm{s}}/\mathrm{d}t$	Change in ground heat storage (or ground heat flux)	$\mathrm{W\,m^{-2}}$	Prescribed from observations, Eq. (6)
$\mathrm{d}U_{\mathrm{tot}}/\mathrm{d}t$	Change in total heat storage	$\mathrm{W\,m^{-2}}$	Eq. (6)