

Table 1: Optimization variables

Variable	Description
P_t^{Onshore}	Onshore wind power at time step t
P_t^{Offshore}	Offshore wind power at time step t
P_t^{Solar}	Solar power at time step t
$P^{\text{PPA,Onshore}}$	Booked onshore PPA for one year
$P^{\text{PPA,Offshore}}$	Booked offshore PPA for one year
$P^{\text{PPA,Solar}}$	Booked solar PPA for one year
P_t^{Ely}	Electrolyzer power consumption at time step t
P_t^{Grid}	Surplus power at time step t
\dot{m}_t^{Ely}	Hydrogen produced by the electrolyzer at time step t
$\dot{m}_t^{\text{Storage,in}}$	Hydrogen stored at time step t
$\dot{m}_t^{\text{Storage,out}}$	Hydrogen provided by the storage at time step t
m_t^{Storage}	Stored hydrogen mass at time step t
$m^{\text{Storage,max}}$	Booked storage capacity for one year