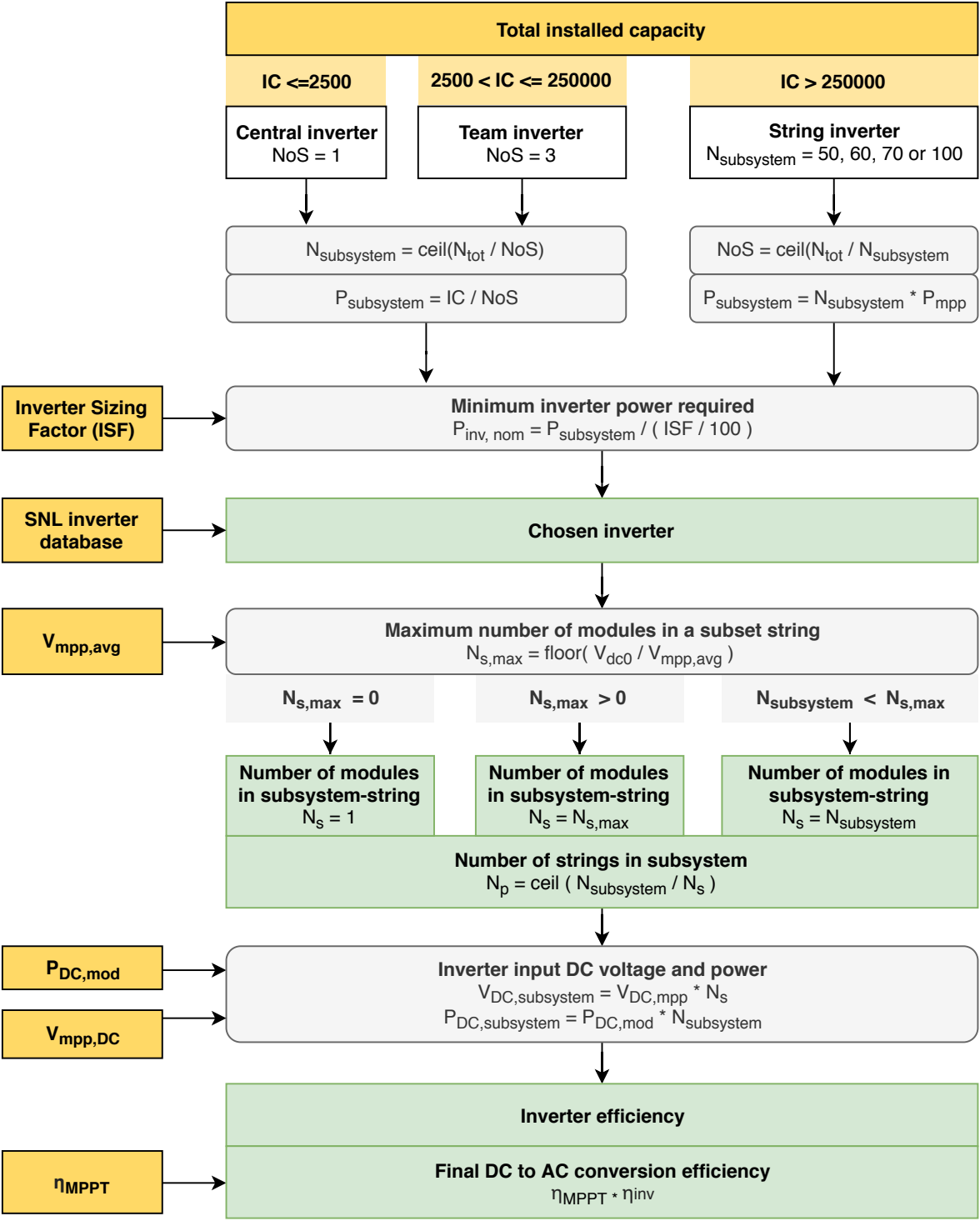
Total installed capacity
IC <=2500
2500 < IC <= 250000
IC > 250000
Central inverter
NoS = 1
Team inverter
NoS = 3
String inverter
N_subsystem = 50, 60, 70 or 100
N_subsystem = ceil(N_tot / NoS)
P_subsystem = IC / NoS
NoS = ceil(N_tot / N_subsystem
P_subsystem = N_subsystem * P_mpp
Inverter Sizing Factor (ISF)
Minimum inverter power required
P_inv, nom = P_subsystem / (ISF / 100)
SNL inverter database
Chosen inverter
V_mpp,avg
Maximum number of modules in a subset string
N_s,max = floor(V_dc0 / V_mpp,avg)
N_s,max = 0
N_s,max > 0
N_subsystem < N_s,max
Number of modules in subsystem-string
N_s = 1
Number of modules in subsystem-string
N_s = N_s,max
Number of modules in subsystem-string
N_s = N_subsystem
Number of strings in subsystem
N_p = ceil (N_subsystem / N_s)
P_DC,mod
V_mpp,DC
Inverter input DC voltage and power
V_DC,subsystem = V_DC,mpp * N_s
P_DC,subsystem = P_DC,mod * N_subsystem
Inverter efficiency
η_MPPT
Final DC to AC conversion efficiency
η_MPPT * η_inv