Concept Key Parameters

Parameter	Present value[†]	ITER-era goal	Reactor Target
Confining Field[a] (T)			
Plasma current[b] (MA)			
Pulse length Δt (sec) and $\Delta t/\tau_E$			
External sustainment/current drive type			
External sustainment/current drive power[‡] (MW)			
Current drive efficiency (η)			
Major Radius[c] (m)			
Minor Radius[c] (m)			
Elongation (κ)			
Central density n_e or $\langle n_e \rangle$ (m^{-3})			
Central T_e or $\langle T_e \rangle$ (keV)			
Central T_i or $\langle T_i \rangle$ (keV)			
Central beta (% and β_N)			
Energy confinement time[d] (s)			
Fusion power density $B\tau_E$ (T-s)			
Core electron transport[d] (χ_e m^2/s)			
Core ion transport[d] (χ_i m^2/s)			
$\rho_* = \rho_D /a$ or $S_D = L^{\S}/ \rho_D$			
$S_\alpha = L^{\S}/ \rho_\alpha$			
Collisionality (ν_*)			
Normalized pulse length $(\tau/\tau_r)^{\#}$			
Normalized pulse length $(\tau/\tau_{Ti=Te})^{\#}$			
Estimated Fusion Power (MW)			
Estimated wall loading (MW/m^2)			
Estimated plasma exhaust power (MW/m^2)			

[a] peak on axis   [b] ohmic or driven or diamagnetic   [c] mean values if not axisymmetric
[‡] power to plasma needed to maintain configuration, magnetic field, or plasma current
[d] measured or estimated from power balance, size, beta, or ne, Te, and Ti
[#] τ_r ($\tau_{Ti=Te}$) is relevant time scale for configuration redistribution (temperature equilibration)
[*] use either a or R as appropriate   [†] indicate if not simultaneous

Table values based upon known or estimated values from present experiments, possible ITER-era targets based on extrapolation from present experiments, and estimated reactor conditions based on previous reactor studies or back-of-envelope style spreadsheet calculations where available.

<u>Please provide definitions, formulary, or assumptions on a separate sheet.</u>