

# Options for Staging at 2x125 GeV

	ACC. [GeV]	Tunnel [GeV]	Feature
TDR	2 x 250	2 x 250	TDR-2013
TDR - updated	2 x 250	2 x 250	ML tunnel width <u>11</u> → 9.5 m, & center-wall 3.5 → 1.5 m Detector hall access w/ vertical shafts No ML-tunnel extension (of 1.4 km), respecting G-upgrade
Opt. F	2 x 125	2 x 250	ML distributed + Full (air-conditioned) tunnel → Beam transport line cost (to be added)
Opt. E	2 x 125	2 x 250	ML upstream + Full (air-conditioned) tunnel → Beam transport line cost (to be added)
Opt. D	2 x 125	2 x 250	Simple (no air-conditioned empty tunnel) + ML downstream → RTML, Circular/U-turn Tunnel duplicated
Opt. C	2 x 125	2 x 125	Min. 2 x 125 GeV w/ no add. tunnel for H.E. extension → Minor additional tunnel (~ 500 m) included for future energy-upgrade work, to be possible in parallel to the continuous 250 GeV run.

# Cost Estimate for the ILC Staging with 250GeV

	e-/e [GeV]	Tunnel [GeV]	Value Total (GILCU) (Oku-JY)	Value Total [%]	Reduct. [%]	Cost- Red. R&D Effect [%]	Total Impact to Reduction [mid. %]	Human resources (M p-hr)&[%]
TDR	250/250	500	7.987 (8,309)	100 %	0			23, (0%)
TDR updated	250/250							
Opt. F	125/125	500						
Opt. E	125/125	500						
Opt. D	125/125	500						
Opt. C	125/125	250						

