



	Primary Characteristic	Secondary Characteristic			
ESTIMATE CLASS	LEVEL OF PROJECT DEFINITION Expressed as % of complete definition	END USAGE Typical purpose of estimate	METHODOLOGY Typical estimating method	EXPECTED ACCURACY RANGE Typical variation in low and high ranges	PREPARATION EFFORT Typical degree of effort relative to least cost index of 1(a)
Class 5	0% to 2%	Concept Screening	Capacity Factored, Parametric Models, Judgment or Analogy	L: -20% to -50% H: +30% to +100%	1
Class 4	1% to 15%	Study or Feasibility	Equipment Factored or Parametric Models	L: -15% to -30% H: +20% to +50%	2 to 4
Class 3	10% to 40%	Budget, Authorisation or Control	Semi-Detailed Unit Costs with Assembly Level Line Items	L: -10% to -20% H: +10% to +30%	3 to 10
Class 2	30% to 70%	Control or Bid / Tender	Detailed Unit Cost with Forced Detail Take-Off	L: -5% to -15% H: +5% to +20%	4 to 20
Class 1	50% to 100%	Check Estimate or Bid / Tender	Detailed Unit Cost with Detailed Take- Off	L: -3% to -10% H: +3% to +15%	5 to 100

Source: Skills & Knowledge of Cost Engineering, AACE International. 1. The state of process technology and availability of cost data affect the range markedly. 2. The +/- value applies to the estimated cost **after** application of contingency (typically at a 50% confidence level) for a given scope. 3. If the range index value of "1" represents 0.005% of project costs, then an index value of 100 represents 0.5%.