

**EM Project Definition Rating Index
Traditional (Conventional) Projects**

Rating Element	Weighting Designation	Weighting Factor	Expected Target Values At End Of Project Phase								
			Pre-Conceptual		Conceptual Design		Preliminary Design/ Performance Baseline		Final Design		
			(CD-0)		(CD-1)		(CD-2)		(CD-3)		
			Maturity Value	Target Score	Maturity Value	Target Score	Maturity Value	Target Score	Maturity Value	Target Score	
COST											
A1	Cost Estimate	H	7.5	1	7.5	2	15.0	5	37.5	5	37.5
A2	Cost Risk/Contingency Analysis	P	3.0	1	3.0	1	3.0	5	15.0	5	15.0
A3	Funding Requirements/Profile	H	7.5	1	7.5	2	15.0	4	30.0	5	37.5
A4	Independent Cost Estimate/Schedule Review	P	3.0	N/A	0.0	N/A	0.0	5	15.0	5	15.0
A5	Life Cycle Cost	P	3.0	1	3.0	1	3.0	4	12.0	5	15.0
A6	Forecast of Cost at Completion	P	3.0	N/A	0.0	N/A	0.0	3	9.0	5	15.0
A7	Cost Estimate for Next Phase Work Scope	P	3.0	5	15.0	5	15.0	5	15.0	5	15.0
Subtotal Cost					36.0		51.0		133.5		150.0
SCHEDULE											
B1	Project Schedule	H	7.5	1	7.5	2	15.0	5	37.5	5	37.5
B2	Major Milestones	P	3.0	1	3.0	2	6.0	5	15.0	5	15.0
B3	Resource Loading	P	3.0	1	3.0	1	3.0	4	12.0	5	15.0
B4	Critical Path Management	H	7.5	1	7.5	1	7.5	4	30.0	5	37.5
B5	Schedule Risk/Contingency Analysis	P	3.0	1	3.0	1	3.0	5	15.0	5	15.0
B6	Forecast of Schedule Completion	P	3.0	N/A	0.0	N/A	0.0	3	9.0	5	15.0
B7	Schedule for Next Phase Work Scope	P	3.0	5	15.0	5	15.0	5	15.0	5	15.0
Subtotal Schedule					39.0		49.5		133.5		150.0
SCOPE/TECHNICAL											
C1	Systems Engineering	H	3.1	3	9.2	4	12.3	5	15.4	5	15.4
C2	Alternatives Analysis	H	3.1	5	15.4	5	15.4	5	15.4	5	15.4
C3	Functional & Performance Requirements (What)	H	3.1	2	6.2	4	12.3	5	15.4	5	15.4
C4	Site Location	P	1.5	3	4.6	4	6.2	5	7.7	5	7.7
C5	Design Basis (How)	H	3.1	2	6.2	4	12.3	5	15.4	5	15.4
C6	Design Criteria (How To)	P	1.5	1	1.5	4	6.2	5	7.7	5	7.7
C7	Technology Needs Identified	P	1.5	3	4.6	5	7.7	5	7.7	5	7.7
C8	Technology Needs Demonstrated	H	3.1	2	6.2	4	12.3	5	15.4	5	15.4

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C9	Trade-Off/Optimization Studies	P	1.5	1	1.5	3	4.6	5	7.7	5	7.7
C10	Plot Plan	P	1.5	2	3.1	4	6.2	5	7.7	5	7.7
C11	Process Flow Diagrams (PFDs)	P	1.5	N/A	0.0	3	4.6	4	6.2	5	7.7
C12	Layout Drawings and Equipment List	P	1.5	N/A	0.0	3	4.6	4	6.2	5	7.7
C13	Piping & Instrumentation Diagrams (P&ID)	H	3.1	N/A	0.0	3	9.2	4	12.3	5	15.4
C14	Site Characterization (Including Surveys and Soil Tests)	P	1.5	1	1.5	3	4.6	5	7.7	5	7.7
C15	Waste Characterization/Assess Current Situation	H	3.1	1	3.1	3	9.2	5	15.4	5	15.4
C16	Waste Acceptance Criteria (WAC) and Waste Packaging	H	3.1	2	6.2	3	9.2	5	15.4	5	15.4
C17	Hazard Analysis	P	1.5	1	1.5	4	6.2	5	7.7	5	7.7
C18	Hazard Classification	H	3.1	1	3.1	4	12.3	5	15.4	5	15.4
C19	Safety Documentation	H	3.1	1	3.1	3	9.2	4	12.3	5	15.4
C20	Safeguards & Security	P	1.5	1	1.5	3	4.6	4	6.2	5	7.7
C21	ES&H Management Planning (including ISMS)	H	3.1	1	3.1	3	9.2	4	12.3	5	15.4
C22	Emergency Preparedness	P	1.5	N/A	0.0	1	1.5	3	4.6	5	7.7
C23	NEPA Documentation	H	3.1	2	6.2	4	12.3	5	15.4	5	15.4
C24	Civil, Structural and Architectural	P	1.5	1	1.5	2	3.1	3	4.6	5	7.7
C25	Mechanical (Piping)	P	1.5	N/A	0.0	1	1.5	2	3.1	5	7.7
C26	Instrument & Electrical	P	1.5	N/A	0.0	1	1.5	2	3.1	5	7.7
C27	Long Lead/Critical Equipment & Materials List	P	1.5	1	1.5	3	4.6	4	6.2	5	7.7
C28	Design Completion	P	1.5	N/A	0.0	1	1.5	2	3.1	5	7.7
C29	Design Reviews for Current Phase	P	1.5	N/A	0.0	5	7.7	5	7.7	5	7.7
C30	Interface Planning and Control	P	1.5	1	1.5	3	4.6	4	6.2	5	7.7
C31	Operating, Maintenance, and Reliability Concepts	P	1.5	2	3.1	4	6.2	5	7.7	5	7.7
C32	Reliability, Availability and Maintainability (RAM) Analysis	P	1.5	N/A	0.0	3	4.6	4	6.2	5	7.7
C33	Transition and Startup Planning	H	3.1	N/A	0.0	3	9.2	4	12.3	5	15.4

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C34	Pollution Prevention and Waste Minimization	P	1.5	2	3.1	3	4.6	4	6.2	5	7.7
C35	Transportation Requirements	P	1.5	1	1.5	2	3.1	4	6.2	5	7.7
C36	Loading/Unloading/Storage Facility Requirements	P	1.5	1	1.5	2	3.1	4	6.2	5	7.7
C37	Training Requirements	P	1.5	1	1.5	1	1.5	3	4.6	5	7.7
C38	Processing/Production Plan/Schedule	P	1.5	N/A	0.0	2	3.1	3	4.6	5	7.7
C39	Operations Plans and Procedures	P	1.5	N/A	0.0	1	1.5	3	4.6	5	7.7
Subtotal Scope/Technical					103.1		253.8		344.6		399.9
MANAGEMENT PLANNING AND CONTROL											
D1	Mission Need Statement	H	3.3	5	16.7	5	16.7	5	16.7	5	16.7
D2	Acquisition Strategy/Plan	H	3.3	3	10.0	5	16.7	5	16.7	5	16.7
D3	Conceptual Design Report (CDR)	P	1.5	N/A	0.0	5	7.7	5	7.7	5	7.7
D4	Project Charter	P	1.5	3	4.6	5	7.7	5	7.7	5	7.7
D5	Key Project Assumptions	P	1.5	3	4.6	4	6.2	5	7.7	5	7.7
D6	Project Execution Plan (PEP)	H	3.3	1	3.3	3	10.0	5	16.7	5	16.7
D7	Integrated Project Team/Project Organization	P	1.5	2	3.1	3	4.6	5	7.7	5	7.7
D8	Baseline Change Control	H	3.3	1	3.3	4	13.3	5	16.7	5	16.7
D9	Project Control	P	1.5	N/A	0.0	3	4.6	5	7.7	5	7.7
D10	Project Work Breakdown Structure (WBS)	P	1.5	1	1.5	4	6.2	5	7.7	5	7.7
D11	Resources Required (People/Material) for Next Phase	P	1.5	5	7.7	5	7.7	5	7.7	5	7.7
D12	Project Risk Management Plan/Assessment	H	3.3	2	6.7	3	10.0	5	16.7	5	16.7
D13	Quality Assurance Program	P	1.5	N/A	0.0	4	6.2	5	7.7	5	7.7
D14	Configuration Management	H	3.3	1	3.3	3	10.0	5	16.7	5	16.7
D15	Value Engineering	P	1.5	1	1.5	3	4.6	5	7.7	5	7.7
D16	Procurement Packages	P	1.5	N/A	0.0	1	1.5	2	3.1	5	7.7
D17	Project Acquisition Process	P	1.5	5	7.7	5	7.7	5	7.7	5	7.7
D18	Funds Management	P	1.5	5	7.7	5	7.7	5	7.7	5	7.7
D19	Reviews / Assessments	P	1.5	5	7.7	5	7.7	5	7.7	5	7.7
Subtotal Management Planning and Control					89.5		156.6		195.3		200.0

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EXTERNAL FACTORS											
E1	Integrated Regulatory Oversight Program	P	3.3	2	6.7	4	13.3	5	16.7	5	16.7
E2	Inter-Site Issues	P	3.3	2	6.7	3	10.0	5	16.7	5	16.7
E3	On-Site Issues	P	3.3	2	6.7	3	10.0	5	16.7	5	16.7
E4	Permits, Licenses, and Regulatory Approvals	H	5.0	2	10.0	3	15.0	5	25.0	5	25.0
E5	Stakeholder Program	H	5.0	2	10.0	4	20.0	5	25.0	5	25.0
Subtotal External Factors				40.0		68.3		100.0		100.0	

Total		308		579		907		1000
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Maturity Values*	N/A	0	1	2	3	4	5
Definition	Not Applicable	Work Not Started	Work Initiated	Concept Defined	Substantive Working Detail	Final Draft	Complete. Fully Meets Criteria
Approximate % Complete Range	N/A	0	1% to 20%	21% to 50%	51% to 80%	81% to 95%	96% to 100%

*Application of maturity values may use the definitions and/or the approximate percent complete ranges shown above, as appropriate for specific rating elements.