

2018 EM Conventional Construction Project Critical Decision Assessment Tool (CDAT)											
Critical Decision Assessment Tool - Traditional Construction Projects (Nuclear, Non-Nuclear), Target Scores by Project Phase											
		Weighting Designation	Weighting Factor	Pre-Conceptual (CD-0)		Conceptual Design (CD-1)		Preliminary Design Performance Baseline (CD-2)		Final Design (CD-3)	
				Maturity Value	Target Score	Maturity Value	Target Score	Maturity Value	Target Score	Maturity Value	Target Score
<b>A. COST</b>											
A1	Cost Estimate	H	7.5	1	7.5	2	15	5	37.5	5	37.5
A2	Cost Risk/Contingency Analysis	P	3	1	3	2	6	5	15	5	15
A3	Funding Requirements/Profile	H	7.5	1	7.5	2	15	4	30	5	37.5
A4	Independent Cost/Schedule Review	P	3	N/A	0	2	6	5	15	5	15
A5	Life Cycle Cost	P	3	1	3	2	6	4	12	5	15
A6	Forecast Cost at Completion	P	3	N/A	0	N/A	0	3	9	5	15
A7	Cost Estimate for Next Phase Work Scope	P	3	5	15	5	15	5	15	5	15
Subtotal Cost Element					<b>36</b>		<b>63</b>		<b>134</b>		<b>150</b>
<b>B. SCHEDULE</b>											
B1	Project Schedule	H	7.5	1	7.5	2	15	5	37.5	5	37.5
B2	Major Milestones	P	3	1	3	2	6	5	15	5	15
B3	Resource Loading	P	3	1	3	1	3	4	12	5	15
B4	Critical Path Management	H	7.5	1	7.5	1	7.5	4	30	5	37.5
B5	Schedule Risk/Contingency Analysis	P	3	1	3	1	3	5	15	5	15
B6	Forecast of Schedule at Completion	P	3	1	3	1	3	5	15	5	15
B7	Schedule for Next Phase Work Scope	P	3	5	15	5	15	5	15	5	15
Subtotal Schedule Element					<b>42</b>		<b>53</b>		<b>140</b>		<b>150</b>
<b>C. SCOPE/TECHNICAL</b>											
C1	Systems Engineering/System Design Descriptions	H	3.2	3	9.5	4	12.7	5	15.9	5	15.9
C2	Alternative Analysis	H	3.2	5	15.9	5	15.9	5	15.9	5	15.9
C3	Functional and Operational Requirements	H	3.2	2	6.4	4	12.7	5	15.9	5	15.9
C4	Design Basis (How)	H	3.2	2	6.4	4	12.7	5	15.9	5	15.9
C5	Design Criteria/Design Margins (How to)	P	1.5	1	1.5	4	5.8	5	7.3	5	7.3
C6	Technology Needs Identified	P	1.5	3	4.4	5	7.3	5	7.3	5	7.3
C7	Technology Needs Demonstrated	H	3.2	2	6.4	4	12.7	5	15.9	5	15.9
C8	Trade-Off Optimization Studies	P	1.5	1	1.5	3	4.4	5	7.3	5	7.3
C9	Site Location	P	1.5	3	4.4	4	5.8	5	7.3	5	7.3
C10	Plot Plan	P	1.5	2	2.9	4	5.8	5	7.3	5	7.3
C11	Process Flow Diagrams (PFDs)	P	1.5	N/A	0.0	3	4.4	4	5.8	5	7.3
C12	Natural Phenomena	P	1.5	2	2.9	3	4.4	5	7.3	5	7.3

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C13	Layout Drawings and Equipment List	P	1.5	N/A	0.0	3	4.4	4	5.8	5	7.3
C14	Piping & Instrumentation Diagrams (P&ID)	H	3.2	N/A	0.0	3	9.5	4	12.7	5	15.9
C15	Mechanical (Piping)	P	1.5	N/A	0.0	1	1.5	2	2.9	5	7.3
C16	Instrument & Electrical	P	1.5	N/A	0.0	1	1.5	2	2.9	5	7.3
C17	Site Characterization (Including Surveys & Soil Tests)	P	1.5	1	1.5	3	4.4	5	7.3	5	7.3
C18	Waste Characterization and Disposition	H	3.2	1	3.2	3	9.5	5	15.9	5	15.9
C19	Pollution Prevention & Waste Minimization	P	1.5	2	2.9	3	4.4	4	5.8	5	7.3
C20	Waste Storage, Packaging and Transportation	H	3.2	2	6.4	3	9.5	5	15.9	5	15.9
C21	NEPA Documentation	H	3.2	2	6.4	4	12.7	5	15.9	5	15.9
C22	Long Lead/Critical Equipment & Material List	P	1.5	1	1.5	3	4.4	4	5.8	5	7.3
C23	Design Completion	P	1.5	N/A	0.0	1	1.5	2	2.9	5	7.3
C24	Design Reviews	P	1.5	N/A	0.0	5	7.3	5	7.3	5	7.3
C25	Interface Planning and Control	P	1.5	1	1.5	3	4.4	4	5.8	5	7.3
C26	Operating, Maintenance & Reliability (OMR) Concepts	P	1.5	2	2.9	4	5.8	5	7.3	5	7.3
C27	Safeguards and Security	P	1.5	1	1.5	3	4.4	4	5.8	5	7.3
C28	Heat and Material Balances	P	1.5	N/A	0.0	3	4.4	5	7.3	5	7.3
C29	Reliability, Availability, Maintainability & Inspectability (RAMI) Analysis	P	1.5	N/A	0.0	3	4.4	4	5.8	5	7.3
C30	Materials Loading/Unloading/Storage	P	1.5	1	1.5	2	2.9	4	5.8	5	7.3
C31	Constructability and Construction Planning	H	3.2	N/A	0.0	2	6.4	4	12.7	5	15.9
C32	Sustainable Design	P	1.5	1	1.5	3	4.4	5	7.3	5	7.3
C33	Transition and Startup Planning	H	3.2	N/A	0.0	3	9.5	4	12.7	5	15.9
C34	Operations Plans and Procedures	P	1.5	N/A	0.0	1	1.5	3	4.4	5	7.3
C35	Civil, Structural and Architectural	P	1.5	1	1.5	2	2.9	3	4.4	5	7.3
Subtotal Scope/Technical Element					<b>94</b>		<b>226</b>		<b>310</b>		<b>350</b>
<b>D. MANAGEMENT PLANNING AND CONTROL</b>											
D1	Mission Need Statement	H	2.2	5	11.1	5	11.1	5	11.1	5	11.1
D2	Acquisition Strategy Plan	H	2.2	3	6.7	5	11.1	5	11.1	5	11.1
D3	Key Project Assumptions	P	1.7	3	5.0	4	6.7	5	8.3	5	8.3

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D4	Project Execution Plan (PEP)	H	2.2	1	2.2	3	6.7	5	11.1	5	11.1
D5	Integrated Project Team (IPT) and Charter	P	1.7	2	3.3	3	5.0	5	8.3	5	8.3
D6	Conceptual Design Report (CDR)	H	2.2	N/A	0.0	5	11.1	5	11.1	5	11.1
D7	Baseline Change Control	H	2.2	1	2.2	4	8.9	5	11.1	5	11.1
D8	Project Control	P	1.7	N/A	0.0	3	5.0	5	8.3	5	8.3
D9	Project Work Breakdown Structure (WBS)	P	1.7	1	1.7	4	6.7	5	8.3	5	8.3
D10	Resources Required (People/Material) for Next Phase	P	1.7	5	8.3	5	8.3	5	8.3	5	8.3
D11	Configuration Management	H	2.2	1	2.2	3	6.7	5	11.1	5	11.1
D12	Project Risk Management Plan/Assessment	H	2.2	2	4.4	3	6.7	5	11.1	5	11.1
D13	Quality Assurance Program	H	2.2	1	2.2	4	8.9	5	11.1	5	11.1
D14	Value Engineering	P	1.7	1	1.7	3	5.0	5	8.3	5	8.3
D15	Procurement Packages	P	1.7	N/A	0.0	1	1.7	2	3.3	5	8.3
D16	Project Acquisition Process	P	1.7	5	8.3	5	8.3	5	8.3	5	8.3
D17	Integrated Regulatory Oversight Program	P	1.7	2	3.3	4	6.7	5	8.3	5	8.3
D18	Inter-Site and On-Site Coordination	P	1.7	2	3.3	3	5.0	5	8.3	5	8.3
D19	Stakeholder Program	H	2.2	2	4.4	4	8.9	5	11.1	5	11.1
D20	Funds Management	P	1.7	5	8.3	5	8.3	5	8.3	5	8.3
D21	Reviews/Assessments	P	1.7	5	8.3	5	8.3	5	8.3	5	8.3
Subtotal Management Planning and Control Element					<b>87</b>		<b>155</b>		<b>195</b>		<b>200</b>
<b>E. SAFETY</b>											
E1	Hazard Analysis/Safety Documentation	P	5	2	10	4	20	5	25	5	25
E2	Integrated Safeguards and Security Planning	P	5	1	5	4	20	4	20	5	25
E3	ES&H Management Planning (Including ISM)	H	15	2	30	4	60	4	60	5	75
E4	Emergency Preparedness	P	5	1	5	2	10	4	20	5	25
Subtotal Safety Element					<b>50</b>		<b>110</b>		<b>125</b>		<b>150</b>
<b>TOTAL</b>					<b>309</b>		<b>607</b>		<b>903</b>		<b>1000</b>