

Commissioning Requirements								
Definitions: <b>IECC-12</b> 2012 International Energy Conservation Code, <b>IECC-15</b> 2015 International Energy Conservation Code, <b>T24-16</b> 2016 California Title 24, <b>Calgreen</b> , <b>LEED-Fun</b> LEED v4.0 Fundamental Cx, <b>LEED-En</b> Leed v4.0 Enhanced Cx, <b>HR</b> Highly Recommended								
Phase	IECC-12	IECC-15	T24-16	Calgreen	LEED-Fun	LEED-En	HR	Action Item
General				X	X	X		CxA must have documented Cx experience on at least two projects of similar size and scope
					X	X		CxA may be an employee of the design firm as long as not part of the design team (buildings between 10,000 and 50,000 SF)
						X		CxA may NOT be an employee of the design firm
			X					CxA may NOT be an employee of the design firm for buildings > 50,000 SF
	X	X						CxA must be a "registered design professional" or an approved "agency"
	X	X						Not required for buildings with < 40 tons cooling AND < 600,000 Btu/h heating. Simple HVAC systems serving sleeping units do not count
			X	X				Required for nonresidential buildings > 10,000 SF
	X	X	X	X	X	X		Systems Commissioned: mechanical and electrical
		X	X	X	X	X		Systems Commissioned: plumbing and renewable energy systems
					X			Systems Commissioned: landscape irrigation and water reuse systems
				X			X	Systems Commissioned: building thermal envelope
Pre-Design	X	X	X	X	X	X		Review Owner's Project Requirements (OPR developed by others)
			X	X	X	X		Review Basis of Design (BOD developed by others)
Design			X		X	X		Review the design documents prior to 60% CD and backcheck comments
	X	X	X	X	X	X		Develop and implement a Cx plan
	X	X	X	X	X	X		Confirm incorporation of Cx requirements in the construction documents
						X		Verify inclusion of systems manual requirements in construction documents
						X	Verify inclusion of operator and occupant training requirements in construction documents	
Construction						X		Review contractor submittals
							X	Conduct construction kickoff meeting
							X	Conduct site observation visits and generate reports
					X	X		Develop FIV (Field Installation Verification) checklists and verify
							X	Verify OPT (Operation Performance Testing - Manufacturer Startup)
Acceptance	X	X	X	X	X	X		Develop FPT (Functional Performance Tests)
	X	X	X	X	X	X		Maintain a discrepancy log throughout the process
	X	X	X	X	X	X		Prepare a final Cx report
			X	X		X		Verify operator and occupant training delivery and effectiveness
	X	X	X	X		X		Verify systems manual updates and delivery
						X		Prepare a facilities requirements and operation and maintenance plan.
Warranty						X		Verify seasonal testing
						X		Review building operations 10 months after substantial completion
						X		Develop an on-going commissioning plan
						X		Develop monitoring-based procedures to assess performance of energy and water consuming systems