

- [EAc1 | Optimize energy performance](#)
- [EAc1 | Optimize energy performance](#)
- [EAc1 | Annual energy use](#)
- [EAc1 | Annual energy use](#)
- [EAc1 | Optimize energy performance](#)
- [EAc1 | Optimize energy performance](#)
- [EAc1 | Optimize energy performance](#)
- [EAc1.1 | Optimize energy performance - lighting power](#)
- [EAc1.1 | Optimize energy performance - lighting power](#)
- [EAc1.1 | Optimize energy performance, lighting power](#)
- [EAc1.1-1.5 | Optimize energy performance](#)
- [EAc1.2 | Optimize energy performance - lighting controls](#)
- [EAc1.2 | Optimize energy performance - lighting controls](#)
- [EAc1.2 | Optimize energy performance, lighting controls](#)
- [EAc1.3 | Optimize energy performance - HVAC](#)
- [EAc1.3 | Optimize energy performance - HVAC](#)
- [EAc1.3 | Optimize energy performance, HVAC](#)
- [EAc1.4 | Optimize energy performance - equipment and appliances](#)
- [EAc1.4 | Optimize energy performance - equipment and appliances](#)
- [EAc1.4 | Optimize energy performance, equipment & appliances](#)
- [EAc1.5 | Optimize energy performance - building envelope](#)
- [EAc1.5 | Optimize energy performance, envelope](#)
- [EAc10 | Renewable energy](#)
- [EAc10 | Space heating and cooling equipment](#)
- [EAc11 | Residential refrigerant management](#)
- [EAc11 | Heating and cooling distribution systems](#)
- [EAc12 | Efficient domestic hot water equipment](#)
- [EAc13 | Lighting](#)
- [EAc14 | High-efficiency appliances](#)
- [EAc15 | Renewable energy](#)
- [EAc2 | Enhanced commissioning](#)
- [EAc2 | On-site renewable energy](#)
- [EAc2 | On-site renewable energy](#)
- [EAc2 | On-site renewable energy](#)
- [EAc2 | On-site renewable energy](#)
- [EAc2 | Insulation](#)
- [EAc2 | On-site renewable energy](#)
- [EAc2 | Enhanced commissioning](#)
- [EAc2 | On-site and off-site renewable energy](#)
- [EAc2 | On-site renewable energy](#)
- [EAc2 | On-site renewable energy](#)
- [EAc2 | Efficient hot water distribution system](#)
- [EAc2 | On-site renewable energy](#)
- [EAc2 | Enhanced commissioning](#)
- [EAc2 | On-site renewable energy](#)
- [EAc2 | On-site renewable energy, 1%](#)
- [EAc2.1 | Existing building commissioning - investigation and analysis](#)
- [EAc2.1 | Existing building commissioning - investigation and analysis](#)
- [EAc2.1 | Renewable energy - 5%](#)
- [EAc2.1-2.3 | Renewable energy](#)
- [EAc2.2 | Existing building commissioning - implementation](#)
- [EAc2.2 | Existing building commissioning - implementation](#)
- [EAc2.2 | Renewable energy - 10%](#)
- [EAc2.3 | Existing building commissioning - ongoing commissioning](#)
- [EAc2.3 | Existing building commissioning - ongoing commissioning](#)
- [EAc2.3 | Renewable energy - 20%](#)
- [EAc3 | Enhanced commissioning](#)
- [EAc3 | Enhanced commissioning](#)
- [EAc3 | Measurement and verification](#)
- [EAc3 | Air infiltration](#)
- [EAc3 | Enhanced commissioning](#)
- [EAc3 | Energy use, measurement and payment accountability](#)
- [EAc3 | Enhanced commissioning](#)
- [EAc3 | Enhanced commissioning](#)
- [EAc3 | Additional commissioning](#)
- [EAc3 | Additional commissioning](#)
- [EAc3 | Advanced utility tracking](#)
- [EAc3 | Enhanced commissioning](#)
- [EAc3 | Energy use, measurement & payment accountability](#)
- [EAc3 | Enhanced commissioning](#)
- [EAc3.1 | Performance measurement - building automation system](#)
- [EAc3.1 | Performance measurement - building automation system](#)
- [EAc3.1 | Building operations and maintenance - staff education](#)
- [EAc3.2 | Performance measurement - system-level metering](#)
- [EAc3.2 | Performance measurement - system-level metering](#)
- [EAc3.2 | Building operations and maintenance - building systems maintenance](#)
- [EAc3.3 | Building operations and maintenance - building systems monitoring](#)
- [EAc3.3 | Performance measurement - system-level metering](#)
- [EAc4 | Enhanced refrigerant management](#)
- [EAc4 | Enhanced refrigerant management](#)
- [EAc4 | Green power](#)
- [EAc4 | On-site and off-site renewable energy](#)
- [EAc4 | Green power](#)
- [EAc4 | Windows](#)
- [EAc4 | Enhanced refrigerant management](#)
- [EAc4 | Enhanced refrigerant management](#)
- [EAc4 | Green power](#)
- [EAc4 | Additional ozone protection](#)
- [EAc4 | Enhanced refrigerant management](#)
- [EAc4 | Enhanced refrigerant management](#)
- [EAc4 | Ozone protection](#)
- [EAc4 | Ozone depletion](#)
- [EAc4 | Enhanced refrigerant management](#)
- [EAc4 | Active solar-ready design](#)

- o [EAc4 | Enhanced refrigerant management](#)
- o [EAc4 | Green power](#)
- o [EAc4 | Enhanced refrigerant management](#)
- o [EAc4.1 | On-site and off-site renewable energy](#)
- o [EAc4.2 | On-site and off-site renewable energy](#)
- o [EAc4.3 | On-site and off-site renewable energy](#)
- o [EAc4.4 | On-site and off-site renewable energy](#)
- o [EAc5 | Measurement and verification](#)
- o [EAc5 | Measurement and verification](#)
- o [EAc5 | Measurement and verification](#)
- o [EAc5 | Measurement and verification](#)
- o [EAc5 | Enhanced refrigerant management](#)
- o [EAc5 | On-site renewable energy](#)
- o [EAc5 | Heating and cooling distribution system](#)
- o [EAc5 | Measurement and verification](#)
- o [EAc5 | Refrigerant management](#)
- o [EAc5 | Measurement and verification](#)
- o [EAc5 | Measurement and verification](#)
- o [EAc5 | Measurement and verification](#)
- o [EAc5 | HVAC Start-up credentialing](#)
- o [EAc5 | Measurement and verification](#)
- o [EAc5 | On-site renewable energy](#)
- o [EAc5 | Measurement and verification](#)
- o [EAc5.1 | Measurement and verification - base building](#)
- o [EAc5.1 | Performance measurement - enhanced metering](#)
- o [EAc5.1 | Measurement and verification - base building](#)
- o [EAc5.1 | Measurement and verification - base building](#)
- o [EAc5.2 | Measurement and verification - tenant submetering](#)
- o [EAc5.2 | Measurement and verification - tenant submetering](#)
- o [EAc5.2 | Performance measurement - enhanced metering](#)
- o [EAc5.2 | Measurement and verification - tenant submetering](#)
- o [EAc5.3 | Performance measurement - enhanced metering](#)
- o [EAc5.4 | Performance measurement - emission reduction reporting](#)
- o [EAc6 | Emissions reduction reporting](#)
- o [EAc6 | Green power](#)
- o [EAc6 | Green power](#)
- o [EAc6 | Green power](#)
- o [EAc6 | Green power](#)
- o [EAc6 | Space heating and cooling equipment](#)
- o [EAc6 | Green power](#)
- o [EAc6 | Emissions reduction reporting](#)
- o [EAc6 | Documenting sustainable building cost impacts](#)
- o [EAc6 | Green power](#)
- o [EAc6 | Green power](#)
- o [EAc6 | Green power](#)
- o [EAc6 | Green power](#)
- o [EAc6 | Green power](#)
- o [EAc6 | Building orientation for passive solar](#)
- o [EAc6 | Green power](#)
- o [EAc6 | Green power](#)
- o [EAc6 | Green power](#)
- o [EAc7 | Community contaminant prevention - airborne releases](#)
- o [EAc7 | Water heating](#)
- o [EAc7 | Air infiltration](#)
- o [EAc8 | Lighting](#)
- o [EAc8 | Envelope Insulation](#)
- o [EAc9 | Appliances](#)
- o [EAc9 | Windows](#)
- o [EAp1 | Fundamental commissioning of building energy systems](#)
- o [EAp1 | Fundamental commissioning of building energy systems](#)
- o [EAp1 | Energy efficiency best management practices - planning, documentation and opportunity assessment](#)
- o [EAp1 | Fundamental commissioning of building energy systems](#)
- o [EAp1 | Fundamental commissioning of the building energy systems](#)
- o [EAp1 | Energy efficiency best management practices - planning, documentation and opportunity assessment](#)
- o [EAp1 | Fundamental commissioning](#)
- o [EAp1 | Existing building commissioning](#)
- o [EAp1 | Fundamental commissioning of the building energy systems](#)
- o [EAp1 | Fundamental commissioning of the building energy systems](#)
- o [EAp1 | Fundamental building systems commissioning](#)
- o [EAp1 | Fundamental building systems commissioning](#)
- o [EAp1 | Minimum energy performance](#)
- o [EAp1 | Minimum energy performance](#)
- o [EAp1 | Fundamental commissioning of the building energy systems](#)
- o [EAp1 | Fundamental Commissioning](#)
- o [EAp1 | Fundamental commissioning of building energy systems](#)
- o [EAp1 | Fundamental commissioning of building energy systems](#)
- o [EAp2 | Minimum energy performance](#)
- o [EAp2 | Minimum energy performance](#)
- o [EAp2 | Minimum energy performance](#)
- o [EAp2 | Minimum energy performance](#)
- o [EAp2 | Minimum energy efficiency performance](#)
- o [EAp2 | Minimum energy performance](#)
- o [EAp2 | Minimum energy performance](#)
- o [EAp2 | Minimum energy performance](#)
- o [EAp2 | Minimum energy efficiency performance](#)
- o [EAp2 | Minimum energy performance](#)
- o [EAp2 | Minimum energy performance](#)
- o [EAp2 | Minimum energy performance](#)
- o [EAp2 | Minimum energy performance](#)
- o [EAp2 | Minimum energy performance](#)
- o [EAp2 | Minimum energy performance](#)
- o [EAp2 | Energy metering](#)
- o [EAp2 | Minimum energy performance](#)
- o [EAp2 | Minimum energy performance](#)
- o [EAp2 | Minimum energy performance](#)
- o [EAp2 | Minimum energy performance](#)
- o [EAp3 | Fundamental refrigerant management](#)
- o [EAp3 | Fundamental refrigerant management](#)

- [EAp3 | Fundamental refrigerant management](#)
- [EAp3 | Fundamental refrigerant management](#)
- [EAp3 | Refrigerant management - ozone protection](#)
- [EAp3 | CFC reduction in HVAC/R equipment](#)
- [EAp3 | Ozone protection](#)
- [EAp3 | Fundamental refrigerant management](#)
- [EAp3 | Fundamental refrigerant management](#)
- [EAp3 | CFC reduction in HVAC/R equipment](#)
- [EAp3 | CFC reduction in HVAC/R equipment](#)
- [EAp3 | CFC reduction in HVAC/R equipment](#)
- [EAp3 | Education of homeowner, tenant, or building manager](#)
- [EAp3 | Fundamental refrigerant management](#)
- [EAp3 | CFC reduction in HVAC&R equipment](#)
- [EAp3 | Fundamental refrigerant management](#)
- [EAp4 | Home size](#)
- [MEAc1 | Optimize energy performance in mid-rise buildings](#)

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Fundamental commissioning and verification

Required

1 result in All .

- [Glossary](#)

Intent

To support the design, construction, and eventual operation of a project that meets the owner's project requirements for energy, water, indoor environmental quality, and durability.

Requirements

Commissioning Process Scope

Complete the following [commissioning \(Cx\)](#) process activities for mechanical, electrical, plumbing, and [renewable energy](#) systems and assemblies, in accordance with ASHRAE Guideline 0-2005 and ASHRAE Guideline 1.1-2007 for HVAC&R Systems, as they relate to energy, water, indoor environmental quality, and durability.

Requirements for exterior enclosures are limited to inclusion in the [owner's project requirements \(OPR\)](#) and [basis of design \(BOD\)](#), as well as the review of the OPR, BOD and project design. NIBS Guideline 3-2012 for Exterior Enclosures provides additional guidance.

- Develop the OPR.
- Develop a BOD

The [commissioning authority \(CxA\)](#) must do the following:

- Review the OPR, BOD, and project design.
- Develop and implement a Cx plan.
- Confirm incorporation of Cx requirements into the construction documents.
- Develop construction checklists.
- Develop a system test procedure.
- Verify system test execution.
- Maintain an issues and benefits log throughout the Cx process.
- Prepare a final Cx process report.
- Document all findings and recommendations and report directly to the owner throughout the process.

The review of the exterior enclosure design may be performed by a qualified member of the design or construction team (or an employee of that firm) who is not directly responsible for design of the building envelope.

Commissioning Authority

By the end of the design development phase, engage a commissioning authority with the following qualifications.

- The CxA must have documented commissioning process experience on at least two building projects with a similar scope of work. The experience must extend from early design phase through at least 10 months of occupancy;
- The CxA may be a qualified employee of the owner, an independent consultant, or an employee of the design or construction firm who is not part of the project's design or construction team, or a disinterested subcontractor of the design or construction team.
 - For projects smaller than 20,000 square feet (1 860 square meters), the CxA may be a qualified member of the design or construction team. In all cases, the CxA must report his or her findings directly to the owner.

Project teams that intend to pursue EA Credit Enhanced Commissioning should note a difference in the CxA qualifications: for the credit, the CxA may not be an employee of the design or construction firm nor a subcontractor to the construction firm.

Current Facilities Requirements and Operations and Maintenance Plan

Prepare and maintain a current facilities requirements and operations and maintenance plan that contains the information necessary to operate the building efficiently. The plan must include the following:

- a sequence of operations for the building;
- the building occupancy schedule;
- equipment run-time schedules;
- setpoints for all HVAC equipment;
- set lighting levels throughout the building;
- minimum outside air requirements;
- any changes in schedules or setpoints for different seasons, days of the week, and times of day;
- a systems narrative describing the mechanical and electrical systems and equipment;
- a preventive maintenance plan for building equipment described in the systems narrative; and
- a commissioning program that includes periodic commissioning requirements, ongoing commissioning tasks, and continuous tasks for critical facilities.

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