Upcoming Scheduled Maintenance for USGBC.org
USGBC.org will be offline from **Friday, May 6 at 9:00 pm EST until Saturday, May 7 at 12:00 pm EST**.
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- EAc1 | Annual energy use
- EAc1 | Optimize energy performance
- EAc1 | Optimize energy performance
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- EAc1 | Optimize energy performance
- 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 | 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
- EAc1.2 | 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
- EAc1.3 | Optimize energy performance - HVAC
- EAc1.3 | Optimize energy performance - HVAC
- EAc1.4 | Optimize energy performance - equipment and appliances
- EAc1.4 | Optimize energy performance, equipment & appliances
- EAc1.4 | Optimize energy performance - equipment and appliances
- EAc1.4 | Optimize energy performance - equipment and appliances
- EAc1.4 | Optimize energy performance - equipment and appliances
- EAc1.5 | Optimize energy performance, envelope
- EAc1.5 | Optimize energy performance - building 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 | 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 | On-site renewable energy
- EAc2 | Enhanced commissioning
- EAc2 | Efficient hot water distribution system
- EAc2 | On-site renewable energy
- EAc2 | On-site renewable energy, 1%
- EAc2 | Enhanced commissioning
- EAc2.1 | Existing building commissioning - investigation and analysis
- EAc2.1 | Renewable energy - 5%
- EAc2.1 | Existing building commissioning - investigation and analysis
- 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 | 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 | Enhanced commissioning
- EAc3 | Energy use, measurement & payment accountability
- EAc3 | Enhanced commissioning
- EAc3 | Advanced utility tracking
- 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 | 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 | Enhanced refrigerant management
- EAc4 | Green power
- EAc4 | Active solar-ready design
- EAc4 | On-site and off-site renewable energy
- EAc4 | Green power
- EAc4 | Green power
- EAc4 | Enhanced refrigerant management
- EAc4 | Enhanced refrigerant management
- EAc4 | Enhanced refrigerant management
- EAc4.1 | On-site and off-site renewable energy
- EAc4.2 | On-site and off-site renewable energy
- EAc4.3 | On-site and off-site renewable energy
- EAc4.4 | On-site and off-site renewable energy
- EAc5 | Measurement and verification
- EAc5 | Measurement and verification
- EAc5 | Measurement and verification
- EAc5 | Enhanced refrigerant management
- EAc5 | On-site renewable energy
- EAc5 | Heating and cooling distribution system
- EAc5 | Measurement and verification
- EAc5 | Refrigerant management
- EAc5 | Measurement and verification
- EAc5 | Measurement and verification
- EAc5 | Measurement and verification
- EAc5 | Measurement and verification
- EAc5 | On-site renewable energy
- EAc5 | Measurement and verification
- EAc5 | HVAC Start-up credentialing
- EAc5 | Measurement and verification
- EAc5.1 | Measurement and verification - base building
- EAc5.1 | Performance measurement - enhanced metering
- EAc5.1 | Measurement and verification - base building
- EAc5.1 | Measurement and verification - base building
- EAc5.2 | Measurement and verification - tenant submetering
- EAc5.2 | Measurement and verification - tenant submetering
- EAc5.2 | Performance measurement - enhanced metering
- EAc5.2 | Measurement and verification - tenant submetering
- EAc5.3 | Performance measurement - enhanced metering
- EAc5.4 | Performance measurement - emission reduction reporting
- EAc6 | Emissions reduction reporting
- EAc6 | Space heating and cooling equipment
- EAc6 | Green power
- EAc6 | Emissions reduction reporting
- EAc6 | Documenting sustainable building cost impacts
- EAc6 | Green power
- EAc6 | Green power
- EAc6 | Green power
- EAc6 | Green power
- EAc6 | Green power
- EAc6 | Building orientation for passive solar
- EAc6 | Green power
- EAc6 | Green power
- EAc6 | Green power
- EAc6 | Green power
- EAc6 | Green power
- EAc7 | Community contaminant prevention - airborne releases
- EAc7 | Water heating
- EAc7 | Air infiltration
- EAc8 | Lighting
- EAc8 | Envelope Insulation
- EAc9 | Appliances
- EAc9 | Windows
- EAp1 | Fundamental commissioning of building energy systems
- EAp1 | Fundamental commissioning of building energy systems
- EAp1 | Fundamental commissioning of the building energy systems
- EAp1 | Energy efficiency best management practices - planning, documentation and opportunity assessment
- EAp1 | Fundamental commissioning
- EAp1 | Existing building commissioning
- EAp1 | Fundamental commissioning of the building energy systems
- EAp1 | Fundamental commissioning of the building energy systems
- EAp1 | Fundamental building systems commissioning
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- EAp1 | Fundamental Commissioning
- EAp1 | Fundamental commissioning of building energy systems
- EAp1 | Fundamental commissioning of building energy systems
- EAp1 | Fundamental commissioning of building energy systems
- EAp1 | Minimum energy performance
- EAp1 | Minimum energy performance
- EAp1 | Energy efficiency best management practices - planning, documentation and opportunity assessment
- EAp2 | Minimum energy efficiency performance
- EAp2 | Minimum energy performance
- EAp2 | Minimum energy efficiency performance
- EAp2 | Minimum energy performance
- EAp2 | Minimum energy performance

- EAp2 | Minimum energy performance
- EAp2 | Minimum energy performance
- EAp2 | Minimum energy performance
- EAp2 | Minimum energy performance
- EAp2 | Minimum energy performance
- EAp2 | Minimum energy performance
- EAp2 | Energy metering
- EAp2 | Minimum energy performance
- EAp2 | Minimum energy performance
- EAp2 | Minimum energy performance
- EAp2 | Minimum energy performance
- EAp2 | Minimum energy performance
- EAp2 | Minimum energy performance
- EAp2 | Minimum energy performance
- EAp2 | Minimum energy performance
- EAp2 | Minimum energy performance
- EAp2 | Minimum energy performance
- EAp2 | Minimum energy performance
- EAp2 | Minimum energy performance
- EAp3 | Fundamental refrigerant management
- 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 | Fundamental refrigerant management
- EAp3 | CFC reduction in HVAC&R equipment
- EAp3 | Education of homeowner, tenant, or building manager
- EAp3 | Fundamental refrigerant management
- EAp4 | Home size
- MEAc1 | Optimize energy performance in mid-rise buildings
- MEAc1 | Optimize energy performance in mid-rise buildings

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LEED BD+C: New Construction | v4 - LEED v4

Enhanced commissioning

Possible 6 points

1 result in**All** .

- Glossary

Intent

To further 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

Implement, or have in place a contract to implement, the following commissioning process activities in addition to those required under EA Prerequisite Fundamental Commissioning and Verification.

Commissioning authority

- 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 a disinterested subcontractor of the design team.

Option 1. Enhanced systems commissioning (3-4 points)

Path 1: Enhanced commissioning (3 points)

Complete the following commissioning process (CxP) 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.

The commissioning authority must do the following:

- Review contractor submittals.
- Verify inclusion of systems manual requirements in construction documents.
- Verify inclusion of operator and occupant training requirements in construction documents.
- Verify systems manual updates and delivery.
- Verify operator and occupant training delivery and effectiveness.
- Verify seasonal testing.
- Review building operations 10 months after substantial completion.
- Develop an on-going commissioning plan.

Include all enhanced commissioning tasks in the OPR and BOD.

OR

Path 2: Enhanced and monitoring-based commissioning (4 points)

Achieve Path 1.

AND

Develop monitoring-based procedures and identify points to be measured and evaluated to assess performance of energy- and water-consuming systems.

Include the procedures and measurement points in the commissioning plan. Address the following:

- roles and responsibilities;
- measurement requirements (meters, points, metering systems, data access);
- the points to be tracked, with frequency and duration for trend monitoring;
- the limits of acceptable values for tracked points and metered values (where appropriate, predictive algorithms may be used to compare ideal values with actual values);
- the elements used to evaluate performance, including conflict between systems, out-of-sequence operation of systems components, and energy and water usage profiles;
- an action plan for identifying and correcting operational errors and deficiencies;
- training to prevent errors;
- planning for repairs needed to maintain performance; and
- the frequency of analyses in the first year of occupancy (at least quarterly).

Update the systems manual with any modifications or new settings, and give the reason for any modifications from the original design.

AND/OR

Option 2. Envelope commissioning (2 points)

Fulfill the requirements in EA Prerequisite Fundamental Commissioning and Verification as they apply to the building's thermal envelope in addition to mechanical and electrical systems and assemblies.

Complete the following commissioning process (CxP) activities for the building's thermal envelope in accordance with ASHRAE Guideline 0–2005 and the National Institute of Building Sciences (NIBS) Guideline 3–2012, Exterior Enclosure Technical Requirements for the Commissioning Process, as they relate to energy, water, indoor environmental quality, and durability.

Commissioning authority must complete the following:

- Review contractor submittals.
- Verify inclusion of systems manual requirements in construction documents.
- Verify inclusion of operator and occupant training requirements in construction documents.
- Verify systems manual updates and delivery.
- Verify operator and occupant training delivery and effectiveness.
- Verify seasonal testing.
- Review building operations 10 months after substantial completion.
- Develop an on-going commissioning plan.