

# FEMP Facility Evaluation (Audit) Decision Tree 2.0



## How to Use this Resource

This decision tree is intended to be a resource to identify approaches to meet the federal comprehensive energy and water evaluation (CEWE) requirements codified in 42 United States Code (U.S.C.) § 8253(f)(3)(A). The federal CEWE requirement is the result of a succession of laws, most recently the Energy Independence and Security Act of 2007 (EISA 2007) Section 432 and the Energy Act of 2020 (EA20) Section 1002.

The Audit Decision Tree is intended to be used in conjunction with the Audit Definitions\*, the FEMP Consolidated Facility Management Guidance†(update in progress), and the best practices and expert judgment already used by agencies to identify the best approaches to complete CEWEs (i.e., energy and water audits) and incorporate performance contracts (i.e., ESPC or UESC) at covered facilities.

Refer to the FEMP Existing Building Commissioning (EBCx) Decision Tool‡ for instructions on completing the federal commissioning requirement codified in 42 U.S.C. § 8253(f)(3)(A).

This decision tree provides criteria to select the most appropriate type of evaluation for covered facilities that have already received at least one audit (i.e., a Repeat Energy and Water Audit) and those that have never had an audit (i.e., a First-Time Energy and Water Audit). **The orange boxes in the decision tree are the endpoints for selecting a type of audit to complete at a facility.**

## The main steps of the FEMP Audit Decision Tree are:

- Determine the covered facilities that meet federal CEWE requirement exemption criteria.
- Identify related facility assessments at covered facilities to possibly combine with efforts to complete the federal CEWE requirement.
- Select soon-to-be demolished or renovated covered facilities that can be quickly determined to meet the federal CEWE requirement.
- Gather facility data to understand the existing conditions and benchmark the facility against others in the portfolio to determine whether an onsite or remote audit is appropriate for a covered facility.
- Determine the best basic or detailed remote or onsite audit type to use to meet the federal CEWE requirement.
- Identify opportunities to implement projects, such as pursuing performance contracts (i.e., ESPC or UESC).

Each agency is encouraged to tailor this resource to best fit its priorities and facility management goals. For example, an agency can decide to pursue an ESPC or UESC at its covered facilities without using the audit decision tree. However, the decision tree may inform agencies about audit types that are suitable for certain covered facilities rather than using the same type of audit to complete the CEWE requirement for all covered facilities.

## Acronyms:

**CBECs** – Commercial Buildings Energy Consumption Survey | **Cx** – Commissioning | **EBCx** – Existing Building Commissioning  
**ECM** – Efficiency Conservation Measure (includes energy, water, and RE measures) | **ESCO** – Energy Services Company  
**ESPC** – Energy Savings Performance Contract | **EUI** – Energy Use Intensity | **LCCA** – Lifecycle Cost Analysis  
**O&M** – Operations and Maintenance | **OCx** – Ongoing Commissioning | **RCx** – Retro-commissioning | **ReCx** – Recommissioning  
**RE** – Renewable Energy | **UESC** – Utility Energy Service Contract | **WUI** – Water Use Intensity

\* <https://www.energy.gov/eere/femp/downloads/femp-facility-evaluation-audit-definitions>

† <https://www.energy.gov/eere/femp/downloads/facility-energy-management-guidelines-and-criteria-energy-and-water-evaluations>

‡ <https://www.energy.gov/eere/femp/articles/femp-existing-building-commissioning-decision-tool>

## General Information

Date  Agency Name

Point of Contact Name  POC Role

Facility Number and Name

Building Age  < 5 yrs  5-15 yrs  >15 yrs Gross floor area (sq.ft.)

Date of last completed comprehensive energy and water evaluation

Audit Report Notes or Comments for the Decision Tree Responses (Optional)

## CEWE Requirement Exemptions

(i) Has the building undergone a comprehensive energy and water evaluation in the past eight (8) years?  Yes  No

(ii)(I) Has the building undergone Commissioning (Cx), Retro-commissioning (RCx), or Recommissioning (ReCx) in the last ten (10) years? Or,  Yes  No

OR

(ii)(II) Is the building currently undergoing RCx, ReCx, or OCx?  Yes  No

(iii) Has the building had a major change in function or use change since the previous evaluation and RCx or ReCx?  Yes  No

(iv) Has the building been benchmarked with public disclosure during the preceding calendar year?  Yes  No

(v)(I) Has the building achieved 30% reduction targets compared to:

(aa) The date of previous comprehensive energy and water evaluation? or  Yes  No

OR

(bb)(AA) The date of most recent Cx, RCx, or ReCx? or  Yes  No

OR

(bb)(BB) The date on which OCx began? or  Yes  No

OR

(v)(II) Does the building have a long-term contract in place guaranteeing energy savings of at least 30% since the most recent Cx, RCx or ReCx?  Yes  No

## CEWE Exemption Result

Your covered facility meets the EA20 Exceptions criteria (i) through (v) and a CEWE is not required for this 4 year evaluation cycle. However, please consider the applicability of including this covered facility in a performance contract (ESPC or UESC) to complete projects identified in past CEWEs that have not been implemented.

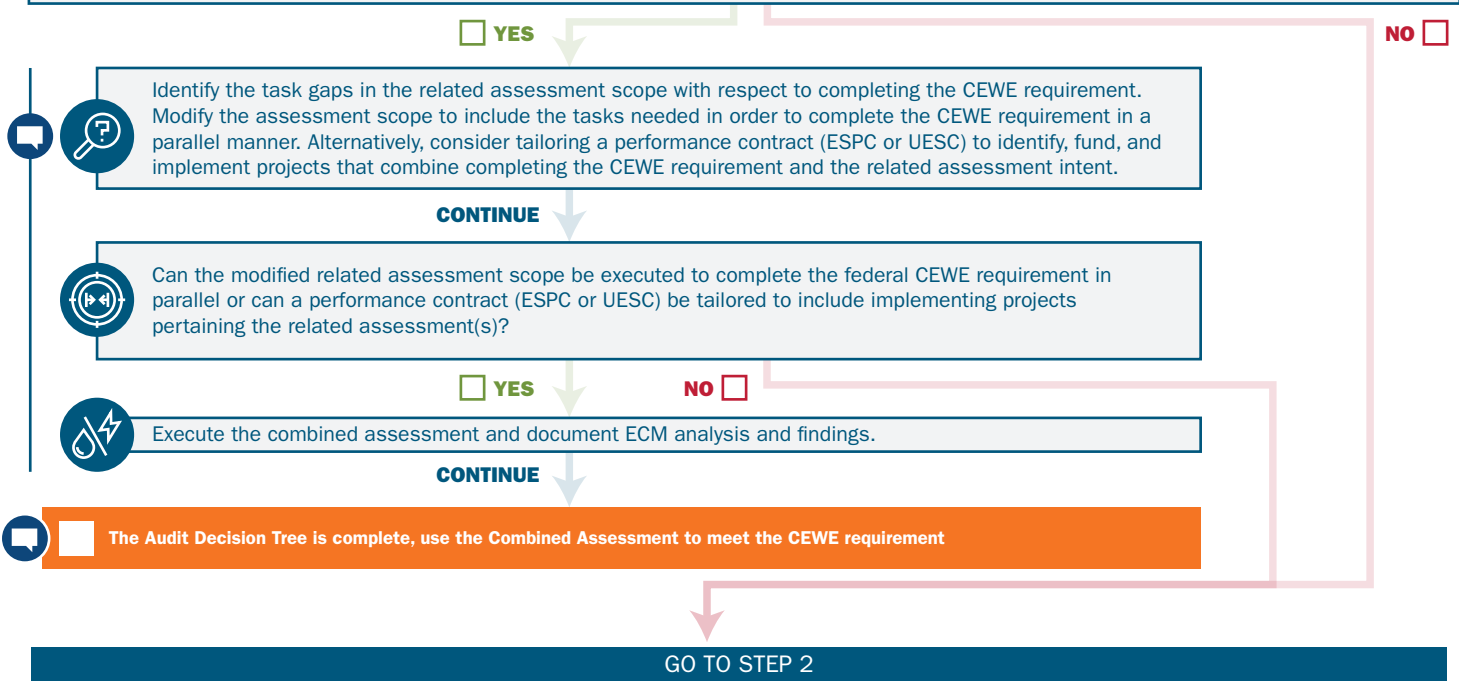
# FEMP Audit Decision Tree Steps



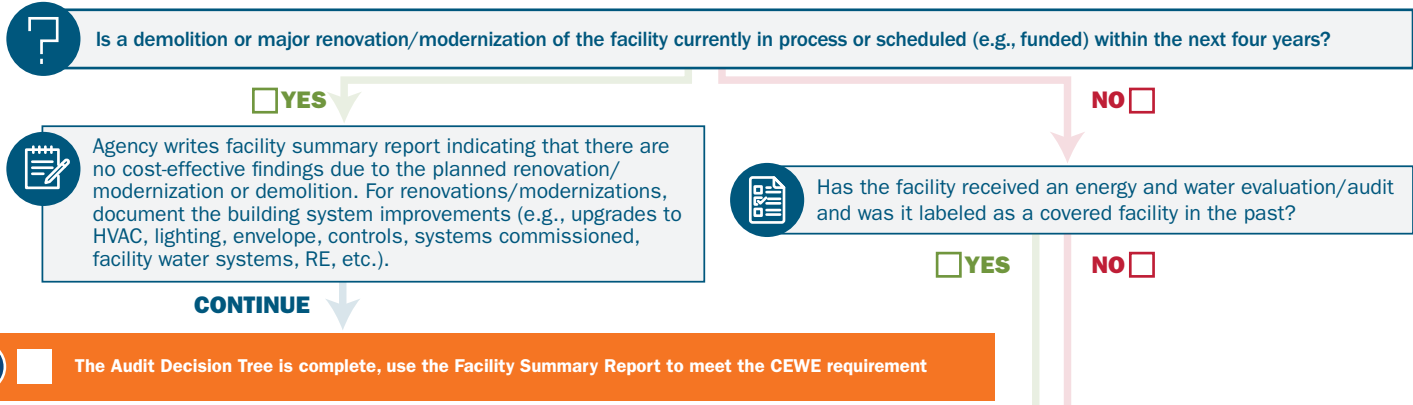
**STEP 1** This decision tree step identifies if there are related facility assessments (i.e., facility assessments related to facility audits) that can be leveraged to complete the federal CEWE requirement.

**Is the agency conducting or planning an assessment at the site that is related to a facility audit and can be modified to complete the CEWE requirement in parallel? Select the checkbox for any related assessment(s) at the facility that apply (answer **Yes** if any checkboxes are selected and **No** if none are selected or apply).**

- Advanced Building Technology Projects (e.g., emerging technology demonstration or pilot, etc.)
- Existing Building Commissioning (i.e., Recommissioning or Retro-commissioning)
- Facility Master Planning, Strategic Planning, or Sustainability Planning
- Net-Zero Resource and/or Emissions Assessment
- O&M Survey
- Performance Certifications for Existing Facilities (e.g., LEED O+M, Energy Star Certified, etc.)
- Resilience Study (e.g., FEMP Technical Resilience Navigator)
- Re-tuning (e.g. FEMP Re-tuning Challenge, etc.)
- Strategic Energy Management (SEM) System (e.g., 50001 Ready, etc.)
- Site Electrification Survey
- Site Electric Vehicle Charging Assessment
- Other: \_\_\_\_\_



**STEP 2** This decision tree step identifies if the facility will have a first-time audit or a repeat audit.



**STEP 3A** This decision tree step identifies if the present facility conditions reflect the previous audit report to satisfy the CEWE requirement or if a new audit should be selected to evaluate the facility onsite or remotely.

**Repeat Energy & Water Audit**  
Gather information on current project status, EUI/WUI, maintenance reports, and facility operations and compare with information from previous audit report.

**Checklist Step 3A**

Select **Yes** or **No** below as applicable based on data gathered and continue the decision tree for audit types to consider.

**Note: Answer all questions and select No if the answer is unknown.**

<input type="checkbox"/> YES	Previous audit was completed satisfactorily (i.e., did the audit include water conservation and renewable energy measures as well as LCCA of all considered measures) and the information is still relevant?	<input type="checkbox"/> NO
<input type="checkbox"/> YES	Current weather-adjusted facility EUI and WUI are at or less than previous audit (and not due to occupancy or function change)?	<input type="checkbox"/> NO
<input type="checkbox"/> YES	Facility function, conditions, and operation remain the same from previous audit?	<input type="checkbox"/> NO
<input type="checkbox"/> YES	Projects and recommendations from previous audit have been implemented, are underway, or remain relevant (i.e., new measures do not need to be identified) and have a path for implementation (e.g., a funding source is applicable or the site is suitable for an ESPC or UESC)?	<input type="checkbox"/> NO
<input type="checkbox"/> YES	The agency has all of the information needed to carry out projects from the previous audit (e.g., obtain appropriated funds or pursue an ESPC or UESC to implement recommended measures?) <b>Note: Select Yes if all projects are completed or underway</b>	<input type="checkbox"/> NO

**STEP 3B** This decision tree step assesses if the availability of facility records is suitable to consider conducting a first-time audit remotely

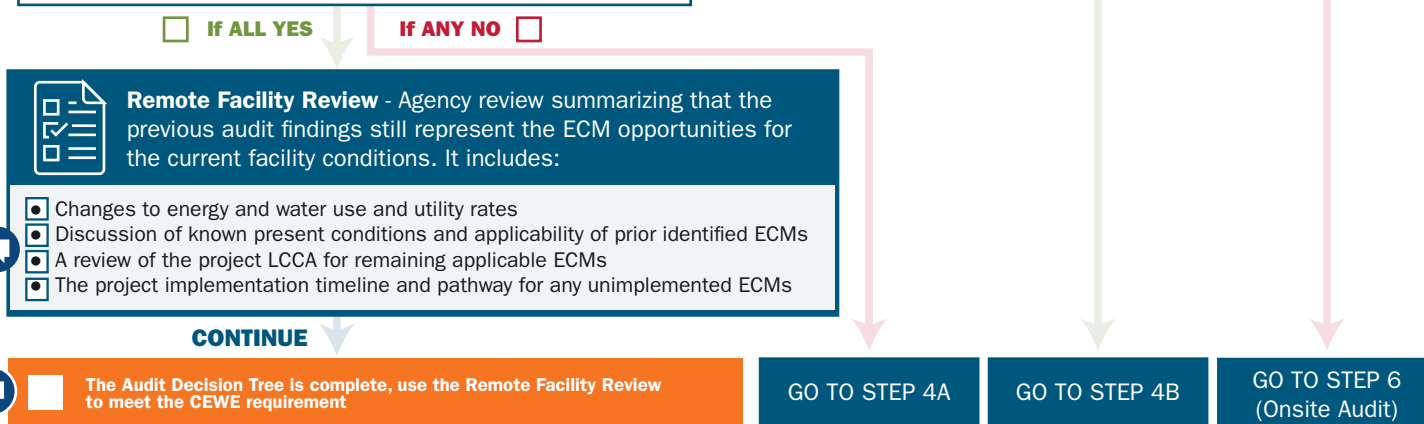
**First-time Energy & Water Audit**  
Are building characteristics and **ALL RELEVANT DATA** to perform LCCA available (i.e., tracked or recorded by the site and able to be shared remotely), obtainable (e.g., can be provided remotely or found in reports from past related assessments), or able to be estimated without an in-person visit?

**Checklist Step 3B**

Select **Yes** or **No** below as applicable for **RELEVANT DATA** that are available or obtainable.

**Note: Answer all questions and select No if the answer is unknown.**


<input type="checkbox"/> YES	Monthly utility consumption, costs, and rates (e.g., utility bills)	<input type="checkbox"/> NO
<input type="checkbox"/> YES	Facility function and occupancy patterns	<input type="checkbox"/> NO
<input type="checkbox"/> YES	Equipment types (e.g., inventory or drawings for HVAC, lighting, building envelope, water, etc.)	<input type="checkbox"/> NO
<input type="checkbox"/> YES	Information for building controls and setpoints	<input type="checkbox"/> NO
<input type="checkbox"/> YES	Recent project history and/or building system problems (e.g., maintenance records)	<input type="checkbox"/> NO
<input type="checkbox"/> YES	Other necessary data based on understanding of building or facility, if applicable <b>Note: Select Yes if no other data is necessary</b>	<input type="checkbox"/> NO






**STEP 4A** This decision tree step assesses the availability of facility records to determine if a repeat audit should be conducted onsite or remotely

**STEP 4B** This decision tree step assesses facility characteristics to determine if a first-time audit should be conducted onsite or remotely

 **Repeat Energy & Water Audit**  
Are building characteristics and **ALL RELEVANT DATA** to perform LCCA found in the prior audit report, available (i.e., tracked or recorded by the site and able to be shared remotely), obtainable (e.g., can be provided remotely), or able to be estimated without an in-person visit?

 **First-time Energy & Water Audit**  
A majority **Yes** indicates that it is applicable to consider a remote audit and a majority **No** indicates that an onsite audit is more applicable.

Checklist Step 4A

Select **Yes** or **No** below as applicable for **RELEVANT DATA** that are available or obtainable.

**Note: Answer all questions and select **No** if the answer is unknown.**

<b>YES</b> <input type="checkbox"/>	Monthly utility consumption, costs, and rates (e.g., utility bills)	<b>NO</b> <input type="checkbox"/>
<b>YES</b> <input type="checkbox"/>	Facility function and occupancy patterns	<b>NO</b> <input type="checkbox"/>
<b>YES</b> <input type="checkbox"/>	Equipment types (e.g., inventory or drawings for HVAC, lighting, building envelope, water, etc.)	<b>NO</b> <input type="checkbox"/>
<b>YES</b> <input type="checkbox"/>	Information for building controls and setpoints	<b>NO</b> <input type="checkbox"/>
<b>YES</b> <input type="checkbox"/>	Recent project history and/or building system problems (e.g., maintenance records)	<b>NO</b> <input type="checkbox"/>
<b>YES</b> <input type="checkbox"/>	Other necessary data based on understanding of building or facility, if applicable <b>Note: Select <b>Yes</b> if <b>no</b> other data is necessary</b>	<b>NO</b> <input type="checkbox"/>

Checklist Step 4B

Select **Yes** or **No** below as applicable for the building(s) being considered.

**Note: Answer all questions and select **No** if the answer is unknown.**

<b>YES</b> <input type="checkbox"/>	Does the facility have a lower than average EUI and WUI than buildings of similar age and function within the agency portfolio or CBECS?	<b>NO</b> <input type="checkbox"/>
<b>YES</b> <input type="checkbox"/>	Presence of ongoing or planned projects at facility limit the number of identifiable ECMs (e.g., system lifetime replacements, etc.)?	<b>NO</b> <input type="checkbox"/>
<b>YES</b> <input type="checkbox"/>	Seeking an <b>OVERVIEW</b> of ECM opportunities among several facilities rather than <b>DETAILED PROJECT DEVELOPMENT</b> for specific facilities?	<b>NO</b> <input type="checkbox"/>
<b>YES</b> <input type="checkbox"/>	Can completed audits for other agency facilities within the last 4 years be applied to the building(s) under consideration for audit (i.e., extrapolate the past audit results to the present building(s) to be audited)?	<b>NO</b> <input type="checkbox"/>
<b>YES</b> <input type="checkbox"/>	The function of building remains the same since the last commissioning (i.e., the initial construction commissioning or subsequent recommissioning or retro-commissioning)?	<b>NO</b> <input type="checkbox"/>

**IF ALL YES**

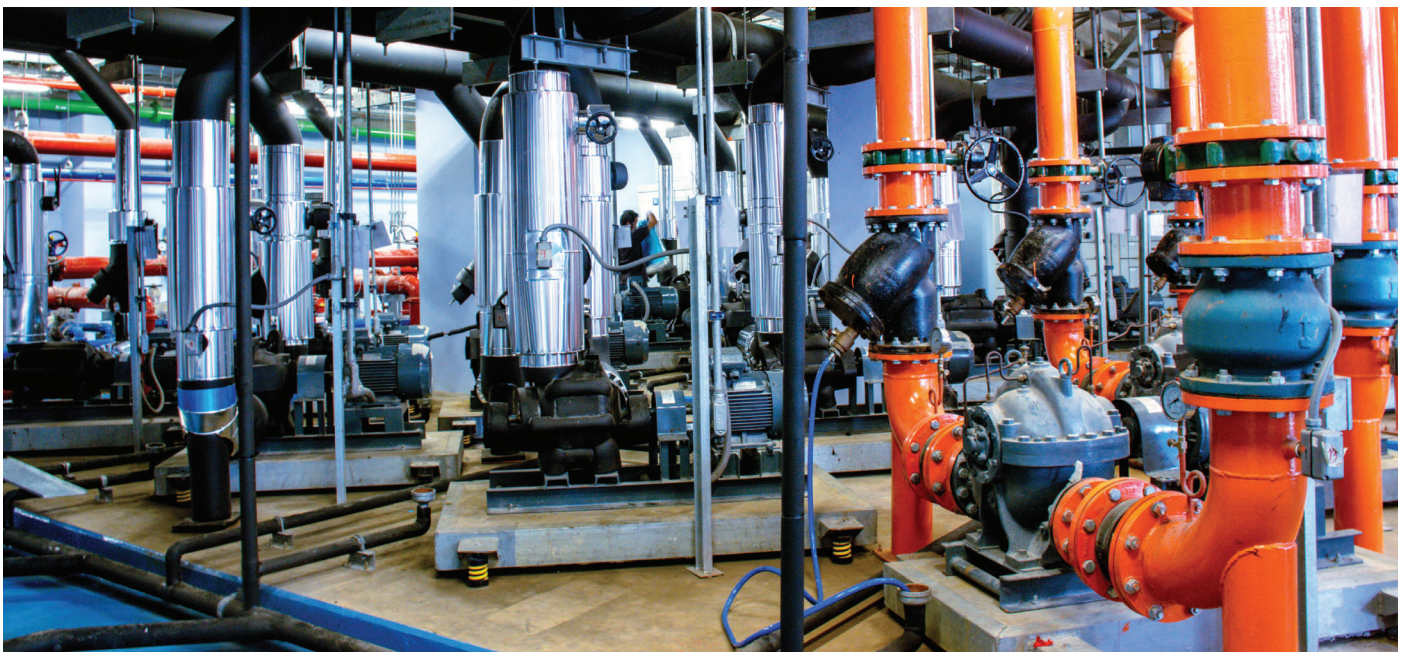
**IF ANY NO**

**IF MAJORITY YES**

**IF MAJORITY NO**

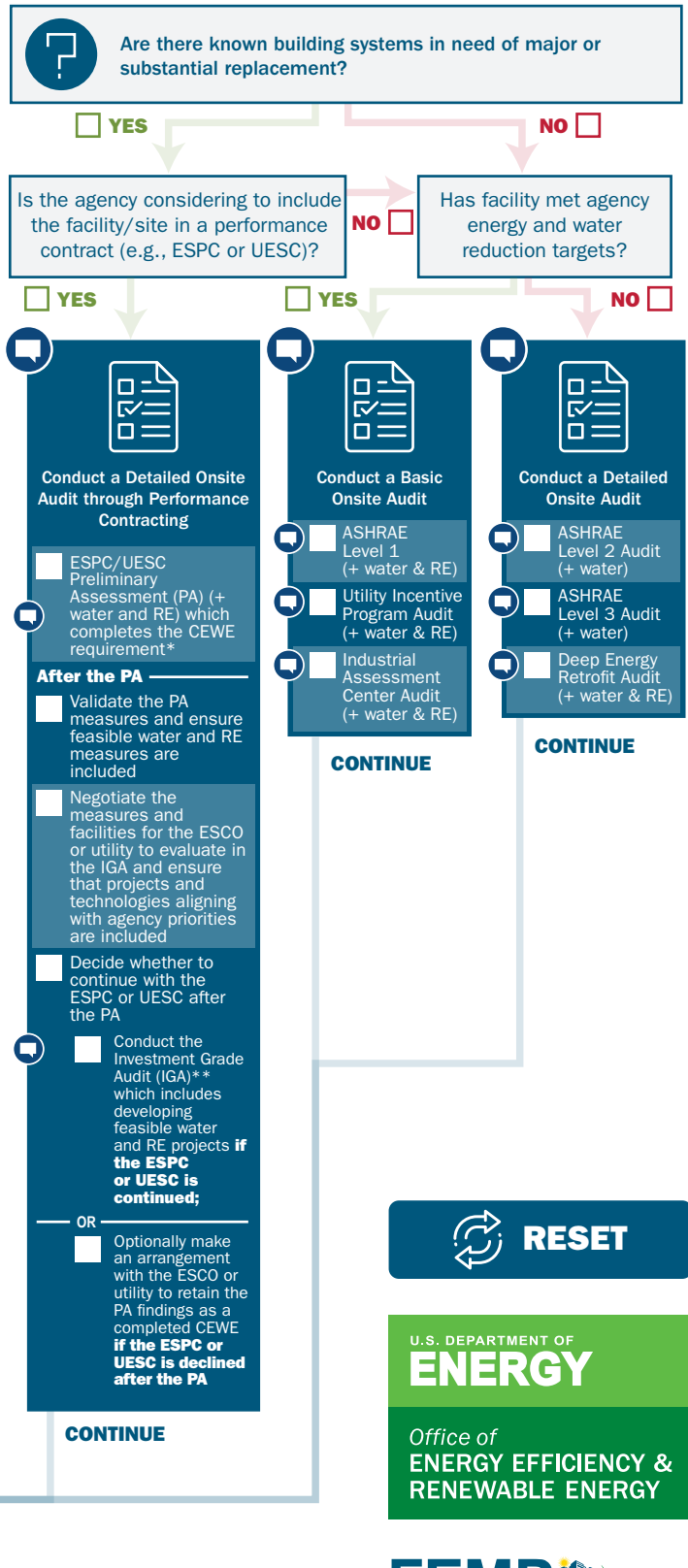
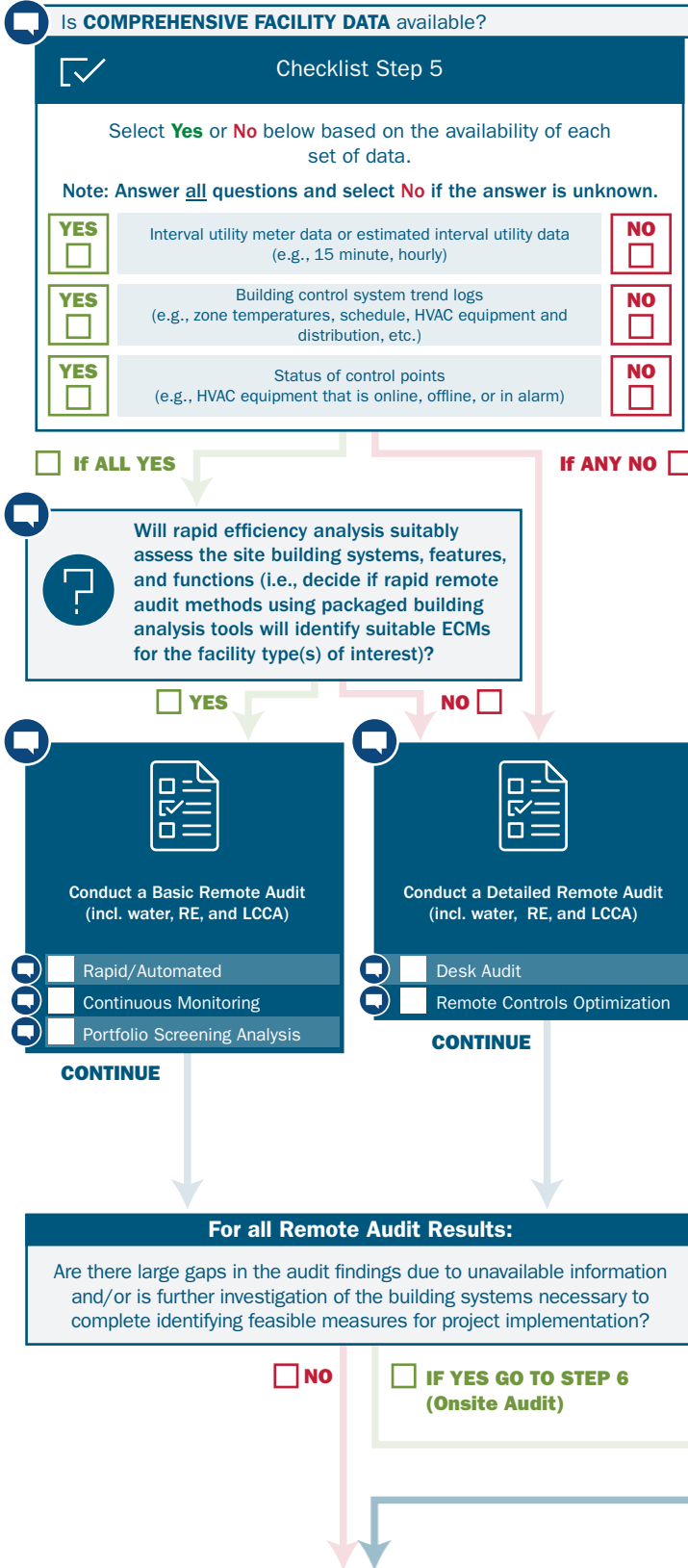
GO TO STEP 5 (Remote Audit)

GO TO STEP 6 (Onsite Audit)



**STEP 5 (Remote Audit)** Determine an applicable remote audit option for completing the CEWE requirement by following this decision tree step.

**STEP 6 (Onsite Audit)** Determine an applicable onsite audit option for completing the CEWE requirement by following this decision tree step.



**The Audit Decision Tree is complete, use the selected Remote or Onsite Audit to meet the CEWE requirement**

\*If the agency decides not to move forward with an ESPC or UESC after reviewing the PA and negotiations, then the agency should arrange with the ESCO or utility to retain the PA findings as a completed audit.  
 \*\*IGA may be referred to as Feasibility Study in the UESC process.

**For more information, visit:**  
[energy.gov/eere/femp](http://energy.gov/eere/femp)