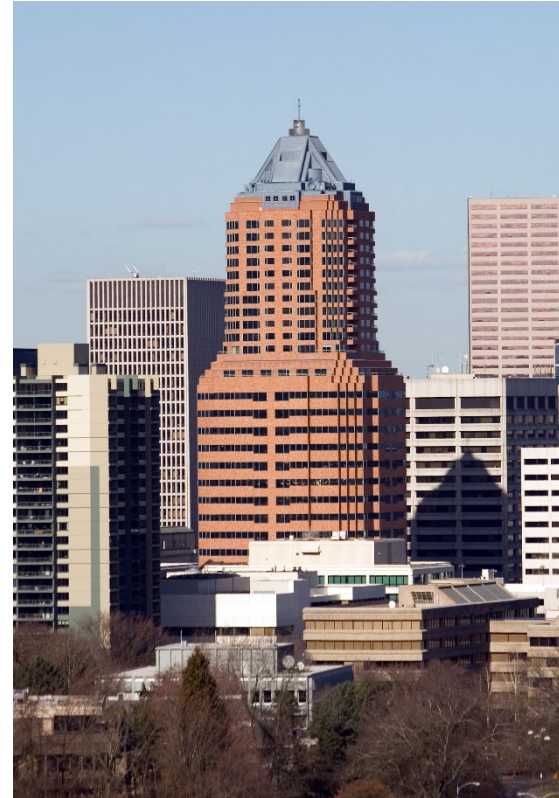


Oregon Department of **ENERGY**

Oregon Building Performance Standard Energy Professionals

April 17, 2026





OREGON DEPARTMENT OF ENERGY

Leading Oregon to a safe, equitable, clean, and sustainable energy future.

Our Mission

The Oregon Department of Energy helps Oregonians make informed decisions and maintain a resilient and affordable energy system. We advance solutions to shape an equitable clean energy transition, protect the environment and public health, and responsibly balance energy needs and impacts for current and future generations.

What We Do

On behalf of Oregonians across the state, the Oregon Department of Energy achieves its mission by providing:

- A Central Repository of Energy Data, Information, and Analysis
- A Venue for Problem-Solving Oregon's Energy Challenges
- Energy Education and Technical Assistance
- Regulation and Oversight
- Energy Programs and Activities

Using Teams

Click to raise your hand.
Click again to lower.

Reactions

Video Options

Webcam On

Webcam Off

Chat

Audio Options

Microphone Off

Microphone On

The image shows a screenshot of a Microsoft Teams meeting window. The window title is "Microsoft Teams meeting" and the browser tab is "Oregon". The meeting duration is 01:12. The main content area displays the "Oregon Department of ENERGY" logo and a "Welcome!" message. A video thumbnail on the right shows a field of pink peonies. The bottom right corner shows a small video icon for a participant. The top toolbar contains icons for Chat, People (2), Raise, React, View, Controls, Notes, Rooms, Apps, More, Camera, Mic, Share, and Leave. Callouts point to the Raise button, Reactions, Video Options, Audio Options, and Chat. The Audio Options section shows "Microphone Off" and "Microphone On" options.

Oregon BPS Energy Professionals

Agenda

- Importance of Energy Professionals
- OR BPS Overview
- Energy Professional Qualifications
 - Experience & Certifications
 - Form Q & Energy Pro Listings
- Energy Professional Tasks
 - Benchmarking: EUI target & EUI
 - Certifying: O&M & EMP
 - Energy Auditing: Reports & EEMs



Importance of Energy Professionals

- OR BPS relies upon energy professionals for:
 - Expertise
 - Experience
 - Integrity
 - Reliability
 - Relationships
- Energy professional contributions
 - Consistent, accurate EUI & EUIt
 - Improved O&M/EMP practices
 - Sensible audits, practical EEMs



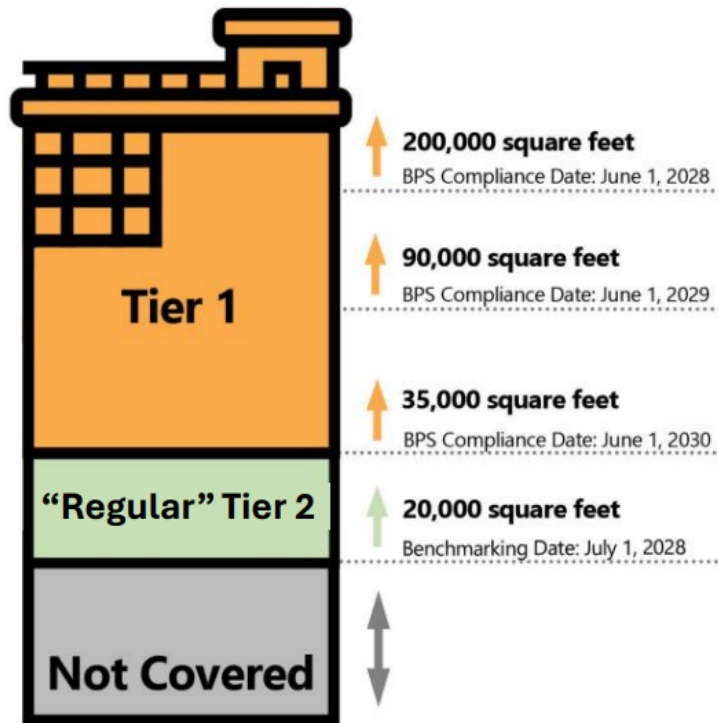
OR BPS Overview

- What buildings are covered?
- When are compliance dates?
- What does compliance entail?
- What types of energy professionals are needed and what do they do?
- Who submits OR BPS reports?
- What are the compliance paths?
 - For Tier 2 buildings
 - For Tier 1 if $EUI \leq EUI \text{ target}$
 - For Tier 1 if $EUI > EUI \text{ target}$

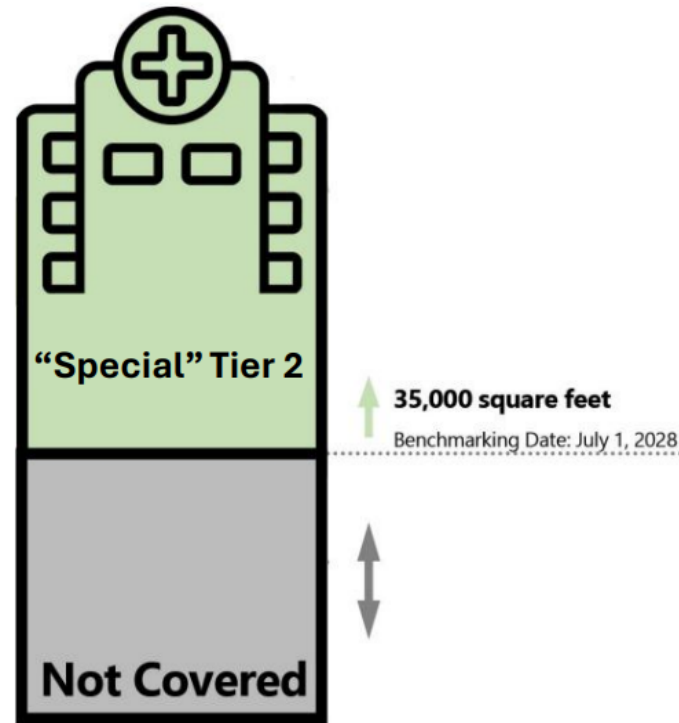
OR BPS Overview

Buildings Covered by OR BPS

NON-RESIDENTIAL,
HOTEL, and MOTEL*



MULTIFAMILY RESIDENTIAL,
HOSPITAL, SCHOOL, UNIVERSITY,
DORMITORY, BARRACKS, PRISON, and
RESIDENTIAL/SENIOR CARE FACILITY*



*Mixed-use buildings follow more detailed guidelines to determine their tier

OR BPS Overview

OR BPS Compliance Dates

Gross Floor Area <i>excludes any parking garage area</i>	Property Type	Tier / Compliance Date
35,000 to 90,000 square feet	Nonresidential, Hotel, or Motel	Tier 1 / June 1, 2030
90,000 to 200,000 square feet	Nonresidential, Hotel, or Motel	Tier 1 / June 1, 2029
200,000 square feet and greater	Nonresidential, Hotel, or Motel	Tier 1 / June 1, 2028
20,000 to 35,000 square feet	Nonresidential, Hotel, or Motel	Regular Tier 2 / July 1, 2028
35,000 square feet and greater	Multifamily, Hospital, School, University, Dormitory, Barracks, Prison, Residential/Senior Care Facility	Special Tier 2 / July 1, 2028

OR BPS Overview

OR BPS Compliance

- **Both Tier 1 and Tier 2 Buildings must “benchmark”**
 - Find Energy Use Intensity Target (where building should be)
 - Calculate Energy Use Intensity (where building is)
 - Compare EUI and EUI_t
- **Tier 1 Buildings must maintain and improve energy use**
 - Operations & Maintenance program (O&M)
 - Energy Management Plan (EMP)
- **Tier 1 Buildings must work to meet energy targets**
 - If $EUI > EUI_t$, action needed to reduce energy use
 - Perform Energy Audit & Life Cycle Cost Assessment (LCCA)
 - Decarbonization Plan option for some district systems
 - Implement cost-effective Energy Efficiency Measures
 - Report EUI annually and a year after final EEM implementation

**EUI =
Net Building
Energy Use /
Gross Floor
Area**

**EUI_t =
predetermined
EUI targets
based on
activity type**

OR BPS Overview

Types of OR BPS Energy Professionals

What types of energy professionals are needed in OR BPS?



- **Qualified Energy Manager (QEM)**
benchmarks Tier 2 buildings

- **Qualified Person (QP)**
benchmarks Tier 1 or Tier 2 buildings
reviews O&M and EMP

- **Qualified Energy Auditor (QEA)**
performs energy audit and life cycle cost assessment
may also benchmark Tier 1 or Tier 2 buildings, review O&M and EMP



OR BPS Overview

Energy Professional Tasks

Tasks	QEM Qualified Energy Manager	QP Qualified Person	QEA Qualified Energy Auditor
Benchmark Tier 2 Buildings (EUI target & EUI)	✓	✓	✓
Benchmark Tier 1 Buildings (EUI target & EUI)	✗	✓	✓
Review O&M and EMP of Tier 1 Buildings	✗	✓	✓
Energy Audits of Tier 1 Buildings with EUI > EUI target	✗	✗	✓
Life Cycle Cost Assessments of Tier 1 Buildings with EUI > EUI target	✗	✗	✓

OR BPS Overview

OR BPS Reporting Responsibilities

Submittal	Tier 1 Buildings	Tier 2 Buildings
Form A: Application for Oregon BPS Compliance	Building Owner	Building Owner
Form G: Grouped Buildings Application for Oregon BPS Compliance	Building Owner	Building Owner
Form X: Exemption Application	Building Owner	Building Owner
Form H: Historic Building Documentation	Building Owner	Building Owner
Form B: Building Activity and Energy Use Intensity Target (EUI _t)	Qualified Person	Qualified Energy Manager or Qualified Person
Form C: Calculation of Energy Use Intensity (EUI)	Qualified Person	Qualified Energy Manager or Qualified Person
Operations and Maintenance (O&M) Checklist	Qualified Person	n/a
Energy Management Plan (EMP) Checklist	Qualified Person	n/a
Form D: Decarbonization Plan (possible substitute for energy audit)	Qualified Person	n/a
Form E: Energy Audit, Energy Audit Report	Qualified Energy Auditor	n/a
Form L: Life Cycle Cost Analysis (LCCA)	Qualified Energy Auditor	n/a

OR BPS Overview

OR BPS Compliance Path - Tier 2 Buildings

For all types of Tier 2 buildings: regular, special, and extended

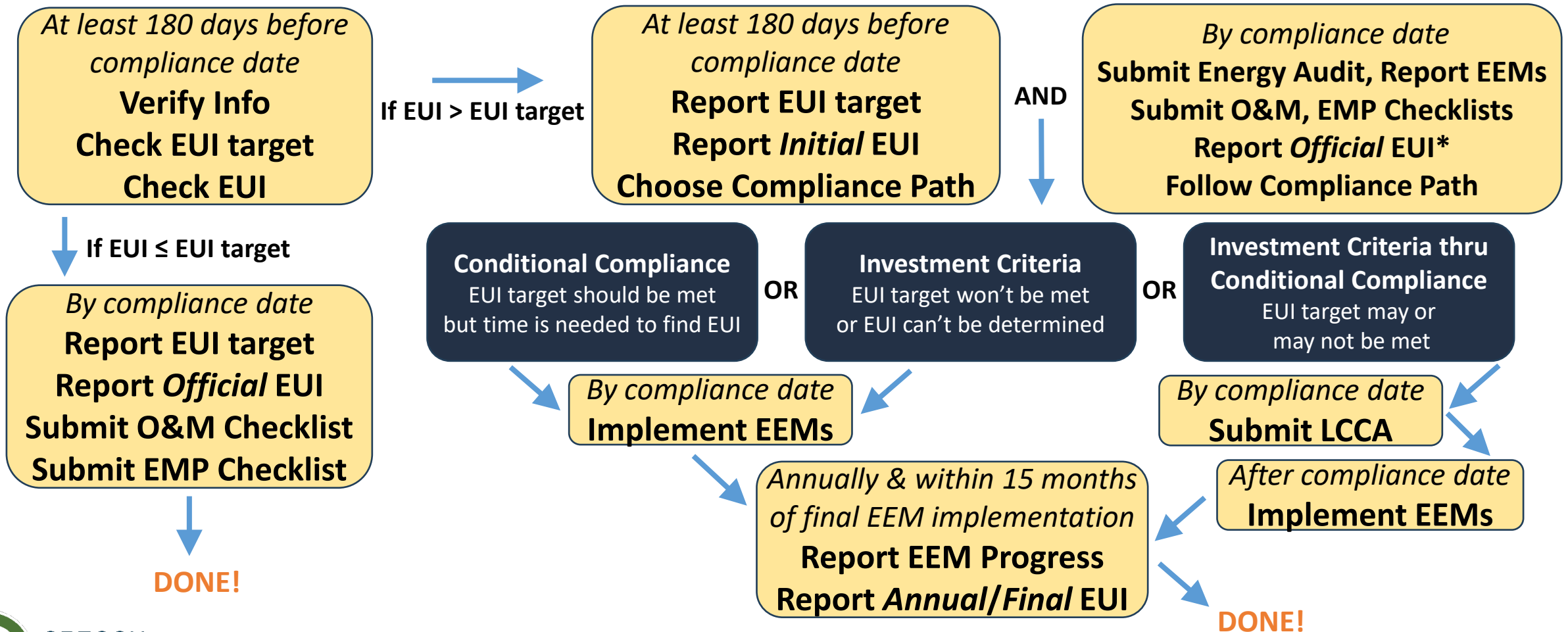
By compliance date →
of July 1, 2028

Verify Info
Report EUI target
Report EUI

→ **DONE!**

OR BPS Overview

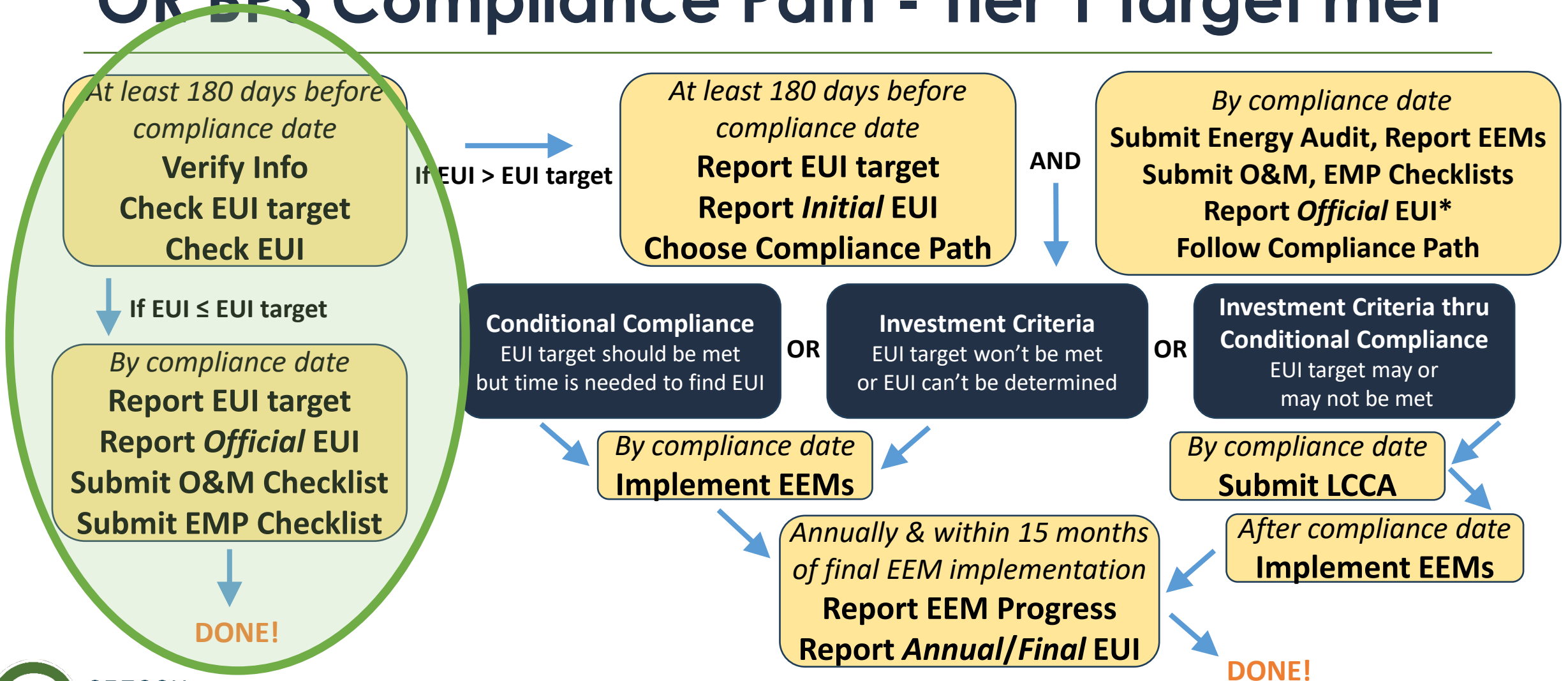
OR BPS Compliance Path - Tier 1 Buildings



*For buildings where EUI > EUI target, Initial EUI (reported at least 180 days before compliance date) automatically becomes Official EUI if a new EUI value is not reported before the compliance date

OR BPS Overview

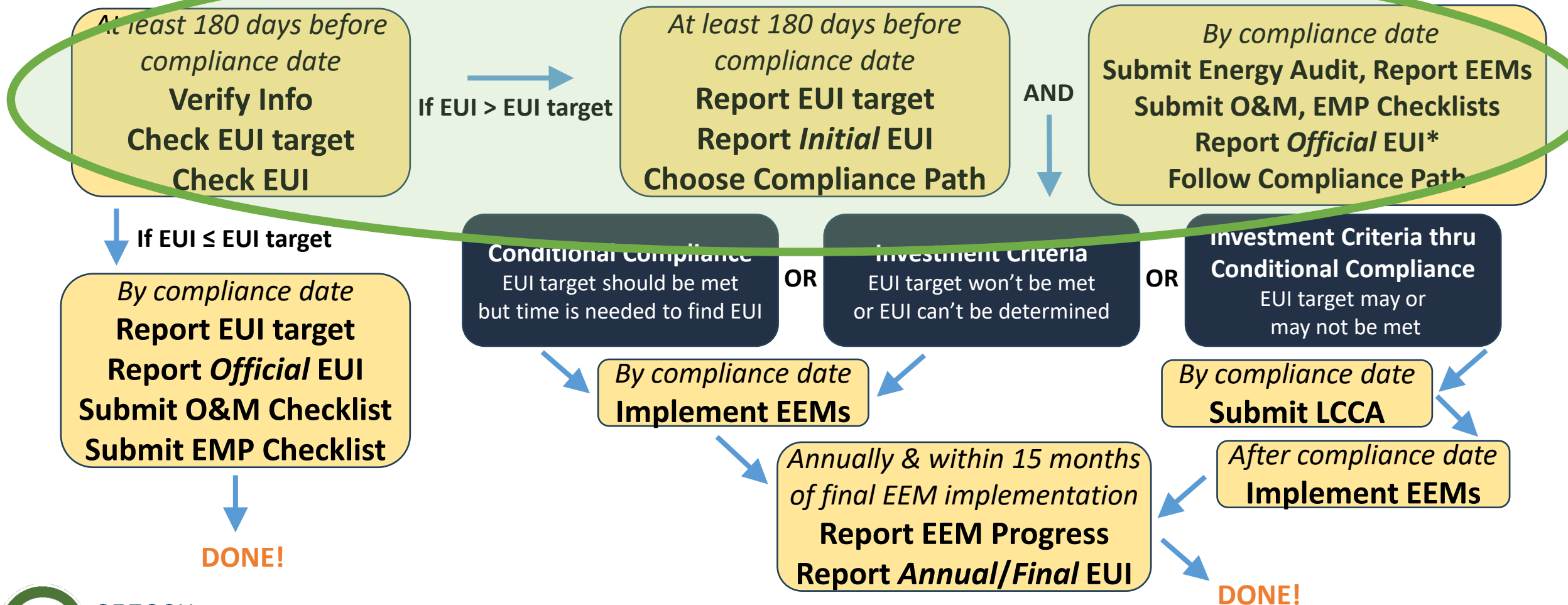
OR BPS Compliance Path - Tier 1 target met



*For buildings where EUI > EUI target, Initial EUI (reported at least 180 days before compliance date) automatically becomes Official EUI if a new EUI value is not reported before the compliance date

OR BPS Overview

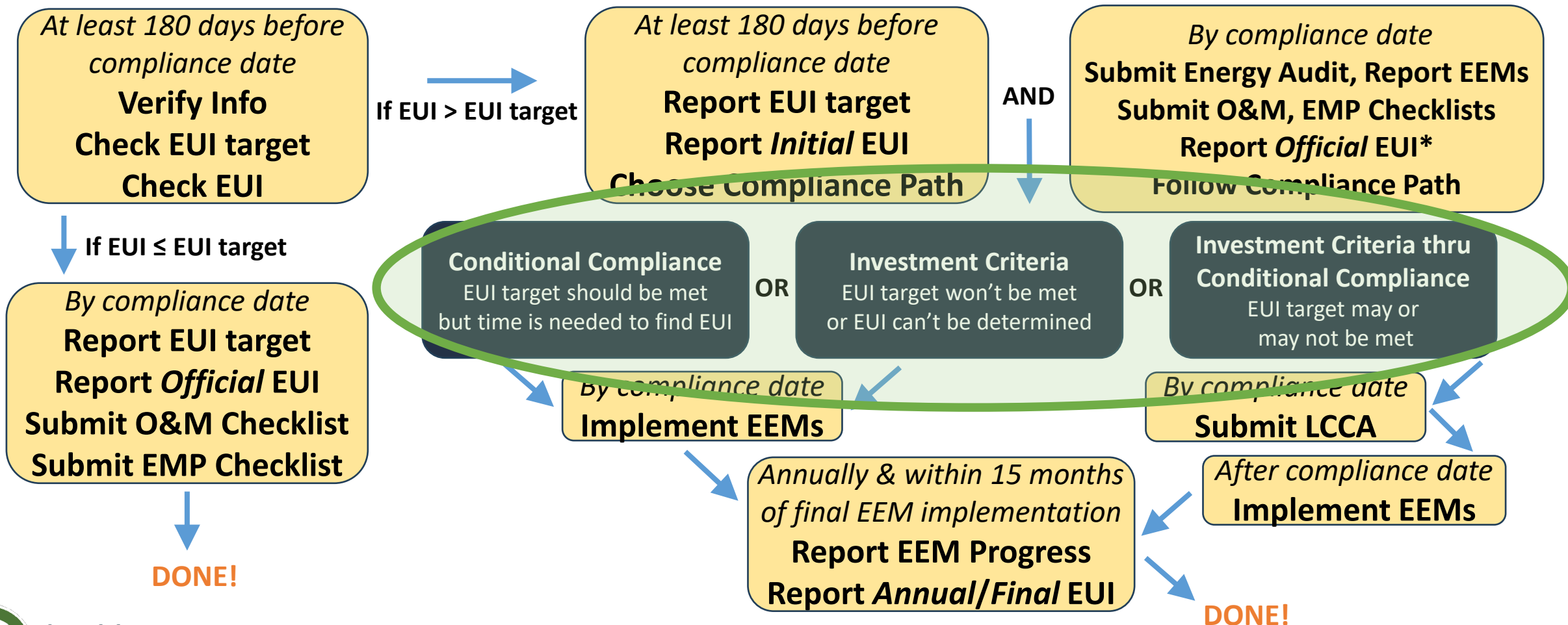
OR BPS Compliance Path - Tier 1 target not met



*For buildings where EUI > EUI target, Initial EUI (reported at least 180 days before compliance date) automatically becomes Official EUI if a new EUI value is not reported before the compliance date

OR BPS Overview

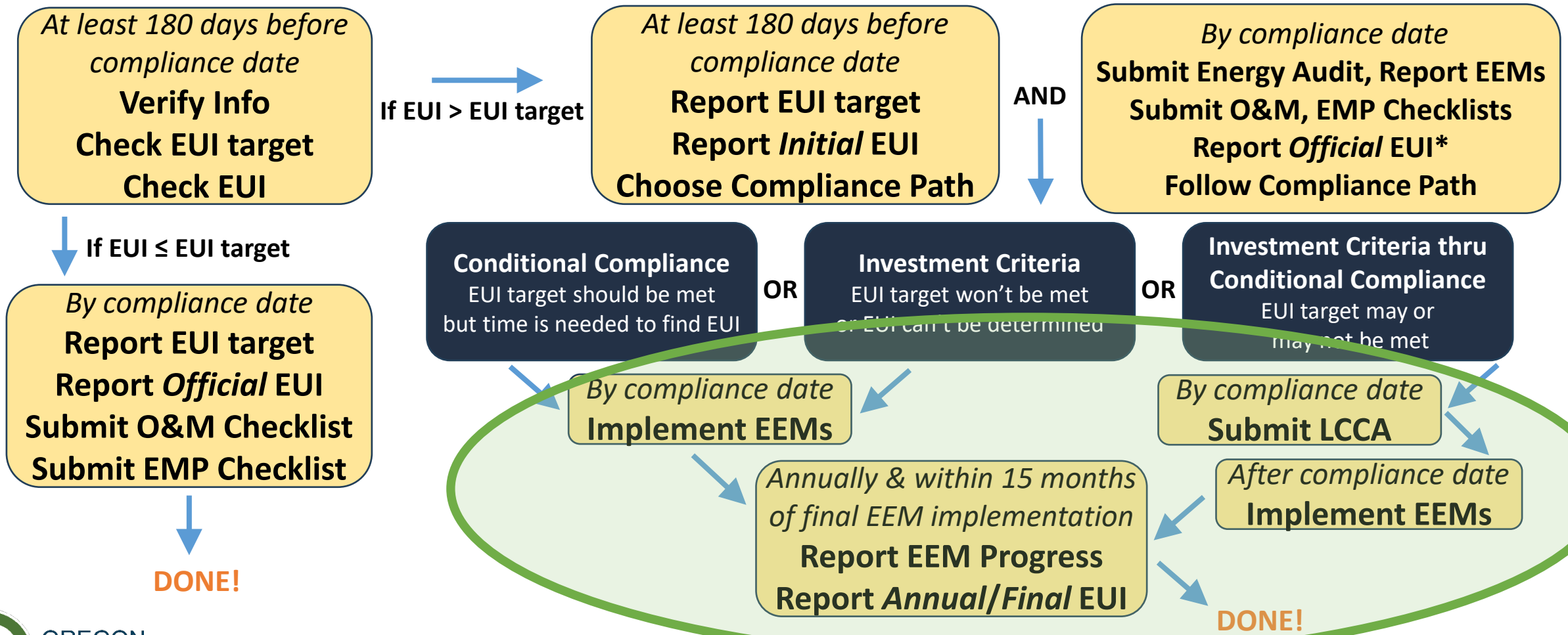
OR BPS Compliance Path - Tier 1 path options



*For buildings where EUI > EUI target, Initial EUI (reported at least 180 days before compliance date) automatically becomes Official EUI if a new EUI value is not reported before the compliance date

OR BPS Overview

OR BPS Compliance Path - Tier 1 follow path



*For buildings where EUI > EUI target, Initial EUI (reported at least 180 days before compliance date) automatically becomes Official EUI if a new EUI value is not reported before the compliance date





Energy Professional Qualifications

- What experience and certifications are needed for QEMs, QPs, QEAs?
- What are all these certifications and how do you get them?
- What is Form Q?
- Is there a list of energy pros?
 - Who can be on it?
 - How is it accessed?

Energy Professional Qualifications

Obtaining Licenses and Certifications

- OR BPS certifications indicated expertise in building energy use, energy management, building operations, energy efficiency, energy auditing
- It takes time, effort, and money to get and keep credentials
- Typical requirements:
 - Education
 - Experience
 - Training classes
 - Exams
 - Continuing education classes
 - Fees for applications, testing, renewals
- Summaries of OR BPS licenses and certifications on the next five slides

Energy Professional Qualifications Required Experience

QEM Qualified Energy Manager	QP Qualified Person	QEA Qualified Energy Auditor
At least two years of educational and/or professional experience with commercial building operations or building energy management	Training and expertise in building energy use analysis	At least three years of professional experience in building energy auditing

Owners or managers of Tier 2 buildings often have the experience to serve as QEM for their buildings - but must submit their quals first!

Specific training and experience in energy analysis and energy auditing needed for QP and QEA positions

Energy Professional Qualifications Required Certifications

Certifications	QEM Qualified Energy Manager No requirements	QP Qualified Person At least one from below	QEA Qualified Energy Auditor At least one from below
OR Registered Architect	✗	✓	✓
OR Professional Engineer	✗	✓	✓
Certified Energy Manager	✗	✓	✓
Energy Management Professional	✗	✓	✓
Building Operator Certification Level II	✗	✓	✗
Building Commissioning	✗	✓	✗
Building Controls degree from LCC	✗	✓	✗
Certified Energy Auditor	✗	✗	✓
Building Energy Auditing Professional	✗	✗	✓

Open for people with different types of building energy expertise
Certifications must be active and in good standing!

Energy Professional Qualifications Licenses & Certifications – Arch, PE

Registered Architect in State of Oregon (QP, QEA certification option)

- Obtain at least a B.S. in Architecture from accredited institution
- Log at least 3,470 hours working over six areas, at least half under qualified architects
- Pass a competency exam
- May also register via reciprocal agreements with other jurisdictions
- Pay fees for application, testing, renewal (every 2 years)
- Fulfill continuing education requirements to maintain registration

Licensed Professional Engineer (PE) in State of Oregon (QP, QEA certification option)

- Obtain at least a B.S. in Engineering from an accredited institution
- Pass the Fundamentals in Engineering test (FE aka EIT)
- Log at least 4 years of work experience under licensed PEs
- References from licensed (or formerly licensed) PEs
- Pass the Professional Engineer test
- May also transfer licenses from other states without retesting
- Pay fees for application, testing, renewal (every 2 years)
- Fulfill continuing education requirements to maintain license

Registrations and licenses from other states do not count for OR BPS

Energy Professional Qualifications Licenses & Certifications – CEE, EMP

CEM from AEE (*QP, QEA certification option*)

- [Certified Energy Manager from Association of Energy Engineers](#)
- Requires varying amounts of related experience, depending upon degree status
 - 3+ years with engineering/architectural degree; 10+ years with no college degree
- Take 4-day training from approved provider, then pass an exam
- Pay fees for training, application & exam, renewal (every 3 years)
- Fulfill continuing education requirements to renew certification

EMP from EMA (*QP, QEA certification option*)

- [Energy Management Professional from Energy Management Association](#)
- Requires varying amounts of energy and management experience
 - 0 years energy work with other energy certifications; 10+ years with no college degree
 - 0 years management work with master's or other mgmt certification; 3+ year with no degree
- Submit application, then pass an exam
- Pay fees for application, exam, renewal (every 3 years)
- Fulfill continuing education requirements to renew certification

Energy Professional Qualifications Licenses & Certifications – BOC, Cx

BOC Level II from Building Potential (*QP certification option*)

- [Building Operator Certification Level II from Building Potential](#)
- Take and pass seven 1-day courses, including exams and projects
- Pass a certification exam
- Maintain certification with continuing education
- Pay fees for training, exam, renewal (annually)

Building commissioning certification (*QP certification option*)

- From an ANSI/ISO/IEC 17024: 2012 accredited organization
- CBCP from AEE
 - [Certified Building Commissioning Professional from Association of Energy Engineers](#)
- CCP from BCCB
 - [Certified Commissioning Professional from Building Commissioning Certification Board](#)

Energy Professional Qualifications Licenses & Certifications – LCC Degree

Energy Management with Building Controls Degree (*QP certification option*)

- [Lane Community College program](#)
- Morphing to Sustainable Building Science degree program
- Neither program is currently active due to low student interest
- May/hopefully will become active again in future
- Former graduates with these degrees are still eligible for QP status

- Note that Washington State's CBPS program allows QP status for a similar community college degree program in Washington

Graduates of other degree programs are not eligible for QP status

- There are many excellent energy/sustainability degree programs
- OR BPS does not have the capacity to vet these programs and verify degrees

Energy Professional Qualifications Licenses & Certifications – CEA, BEAP

CEA from AEE (*QEA certification option*)

- [Certified Energy Auditor from Association of Energy Engineers](#)
- Requires varying amounts of related experience, depending upon degree status
 - 3+ years with engineering/architectural degree, 10+ years with no college degree
- Take 4-day training from approved provider, then pass an exam
- Pay fees for training, application & exam, renewal (every 3 years)
- Fulfill continuing education requirements to renew certification

BEAP from ASHRAE (*QEA certification option*)

- [Building Energy Auditing Professional from American Society of Heating, Air-Conditioning and Refrigerating Engineers](#)
- Requires varying amounts of related experience, depending upon degree status
 - 2+ years with engineering/architectural degree, 7+ years with no college degree
- Requires completion of 5 commercial energy audits, 2 hrs safety training, sign ethics agreement
- Pass an exam, no required training course
- Pay fees for exam and renewal (every 3 years)
- Fulfill continuing education requirements to renew certification

Energy Professional Qualifications

Form Q: Energy Professional Qualifications

- Energy professionals must submit their qualifications to get QEM, QP, or QEA status **before submitting any OR BPS forms or reports**
- Use [Form Q: Energy Professional Qualifications](#)
 - Electronically fillable pdf form, email to OregonBPS@energy.Oregon.gov
- Every person who wants to act as QEM, QP, or QEA must fill out a Form Q
 - QEM, QP and QEA designations are for individuals, not companies or organizations
- Building owners, building managers, facility managers, or employees of the building owner can act as energy professionals if they have the quals

Energy Professional Qualifications

What Info is Collected on Form Q?

- Four sections
 - Basic contact info and preferences
 - QEM info – exp only
 - QP info – exp & cert
 - QEA info – exp & cert
- Check boxes & fill out sections for each position you want
 - QP can do QEM tasks
 - QEA can do QP & QEM tasks
 - Only publicly listed for each position if section is filled out and box is checked



Energy professionals shall fill out this form before benchmarking or auditing a building as part of the Oregon Building Performance Standard program.

When complete, submit this form by clicking this button >> **SUBMIT form to ODOE**

Name	
Title	
Company	
Company URL	
Address	
Telephone	
Email	
<input type="checkbox"/>	Add me to the OR BPS email list for energy professionals
<input type="checkbox"/>	Add me to the OR BPS website listing of energy professionals based on the information given below
Oregon Areas Served	
I certify that the information provided herein is true and accurate.	
Signature	Date

<input type="checkbox"/>	Qualified Energy Manager - QEM - can benchmark Tier 2 buildings	
Experience: at least two years of educational and/or professional experience with commercial building operations or building energy management		
Mo/Yr to	Mo/Yr	Description of Experience
	to	
	to	
Certifications: none needed		

<input type="checkbox"/>	Qualified Person - QP - can benchmark Tier 1 and Tier 2 buildings	
Experience: at least three years of educational and/or professional experience with commercial building operations or building energy management		
Mo/Yr to	Mo/Yr	Description of Experience
	to	
	to	
	to	
Certifications: at least one of the certifications listed below		
Certification / Organization	License Number	Valid until Mo/Yr
Prof Architect / Oregon		
Prof Engineer / Oregon		
CEM / AEE		
BOC Level II/Building Potential		
EMP / EMA		
*Other Cert / Org:		
Sustainable Building Science degree (formerly Energy Mgmt with Building Controls) from Lane Community College	Mo/Yr of Graduation:	

<input type="checkbox"/>	Qualified Energy Auditor - QEA - can audit & benchmark Tier 1 & Tier 2 buildings	
Experience: at least three years of professional experience in building energy auditing		
Mo/Yr to	Mo/Yr	Description of Experience
	to	
	to	
	to	
Certifications: at least one of the certifications listed below		
Certification / Organization	License Number	Valid until Mo/Yr
Prof Architect / Oregon		
Prof Engineer / Oregon		
BEAP / ASHRAE		
CEA / AEE		
CEM / AEE		
EMP / EMA		

*Building Commissioning professional certified by an ANSI/ISO/IEC 17024:2012 accredited organization



Energy Professional Qualifications

Review of Qualifications

- OR BPS reviews the information submitted on each Form Q to the best of our ability
- Form Q reviews may take two to three weeks
- **What we look for:**
 - Are the licenses or certifications ones we accept?
 - Are licenses and certifications active and in good standing?
 - Is the reported experience commensurate with the position?
- QEM/QP/QEA status doesn't mean we endorse any individuals
 - OR BPS reserves the right to rescind status due to poor performance

Energy Professional Qualifications OR BPS List of Energy Professionals

- List of energy professionals with QEM/QP/QEA status who can submit OR BPS forms and reports
 - Internal list – **all** approved QEMs, QPs, QEAs
 - Website list – lists of approved QEMs, QPs, QEAs who want their info made public
 - **Must check the right box on Form Q**
 - OR BPS doesn't edit the info supplied, except to standardize company names
 - OR BPS enters people on the three public QEM/QP/QEA lists only if they checked the box and filled out that section of Form Q

5 OREGON DEPARTMENT OF ENERGY
YEARS OF SERVICE

Building Performance Standard

Form Q: Energy Professional Qualifications

Energy professionals shall fill out this form before benchmarking or auditing a building as part of the Oregon Building Performance Standard program.

When complete, submit this form by clicking this button >> [SUBMIT form to ODOE](#)

Name	
Title	
Company	
Company URL	
Address	
Telephone	
Email	
<input type="checkbox"/>	Add me to the OR BPS email list for energy professionals
<input type="checkbox"/>	Add me to the OR BPS website listing of energy professionals based on the information given below
Oregon Areas Served	
I certify that the information provided herein is true and accurate.	
Signature	Date



Energy Professional Responsibilities

- Benchmarking
 - EUI target and EUI
- Reviewing
 - O&M and EMP
- Energy Auditing
 - Reporting, EEMs, LCCAs
- Decarbonization Plans
 - District system option

Energy Professional Responsibilities Benchmarking – EUI target

- EUI target can be found by a:
 - QEM, QP, or QEA for Tier 2 buildings / QP or QEA for Tier 1 buildings
- EUI target is reported on:
 - Form B: Building Activity and Energy Use Intensity Target (EUIt)
 - Form not available yet, will be in online portal that's under development now
- Use the [OR BPS EUI Target Tool](#), a Microsoft Excel .xlsx spreadsheet
 - Finds the EUI target in kBtu/SF
 - Determines building tier and compliance date
- No details about EUI target or Target Tool today, please refer to:
 - [Guidance Document BPS 004 – Calculating Energy Use Intensity](#)
 - [BPS | Webinar: EUI Target Tool Overview | March 20, 2026](#)

Energy Professional Responsibilities Benchmarking – EUI Logistics

- EUI can be calculated by a:
 - QEM, QP, or QEA for Tier 2 buildings / QP or QEA for Tier 1 buildings
- EUI target is reported on:
 - Form C: Calculation of Energy Use Intensity (EUI)
 - Form not available yet, will be in online portal that's under development now
- Bulk of EUI calculation done in [Energy Star Portfolio Manager \(ESPM\)](#)
- For details about EUI calculations and ESPM, please refer to:
 - [Guidance Document BPS 004 – Calculating Energy Use Intensity](#)
 - Plus the information on the next few slides

Energy Professional Responsibilities

Benchmarking – EUI Basis

- EUI = building energy use / gross floor area, not including parking area
- EUI is based on the **net energy use** of the building
 - Net energy use: the sum of metered and bulk fuel energy that enters a building, minus the sum of metered energy that leaves the building
 - Excess energy generation (solar, wind, etc.) sent to the grid can be subtracted
 - First be sure to understand each building's metering and energy billing, as energy bills may already report net energy use!
- EUI must be calculated from any 12 consecutive months over the last 24 months before the reporting date
 - Gives some flexibility in choosing the best value

Energy Professional Responsibilities

Benchmarking – ESPM Input & Output for EUI

- Input to ESPM
 - Description of buildings and meters
 - Monthly energy use of all fuels for at least 24 months
 - Monthly energy generation, if applicable, for at least 24 months
 - Fuel deliveries for at least 24 months
- Output from ESPM
 - **Site WN-EUI** = weather-normalized energy use intensity
 - This is the value that gets compared to EUI target!
 - WN-EUI is generally within 2 to 3 points of EUI
 - Monthly energy use / generation for each fuel
 - Link to OregonBPS ESPM account

Energy Professional Responsibilities

Benchmarking – Delivered Fuels & EUI

- Good practice to log delivered fuels in ESPM, even if they are small
 - ESPM has the capability to log fuels without monthly bills
- **Note that delivered fuels could block ESPM's weather-normalization**
 - Need at least 5 monthly entries over 2 years to develop a weather correlation
 - May need to distribute delivered fuels over more months,
 - Base distributed values on number of days day if use is steady
 - Base distributed values on HDD or outdoor temperature if use is more seasonal
- What about generator energy use?
 - If run once a month to check operation, doesn't need to be included in EUI
 - If activated during a power outage or emergency, include in EUI

Energy Professional Responsibilities

Benchmarking – EUI Adjustments

- Some energy end-uses are not included in EUI calculations
- If **continuously submetered**, can subtract the energy use of:
 - Parking lots, EV chargers, transportation equipment used outside the building
 - Communications equipment unrelated to primary purpose of building
- **Subtracting submetered energy use can be done within ESPM**
 - Enter submetered values as negative numbers
 - Include submeter in the total used to calculate EUI
- First be sure to understand each building's energy metering

Energy Professional Responsibilities

Benchmarking – EUI Allowances

- What if parking lot and EV charger energy use is not submetered?
 - Allowances for parking lot and EV chargers will be added to Form C reporting
 - Will also include an adjustment if parking lot area is included in ESPM's WN-EUI
 - Based on [Parking and the ENERGY STAR Score Technical Reference](#)
[Portfolio Manager Technical Reference: EV Charging | ENERGY STAR](#)

- Should look something like this >>
- Make sure to note whether parking lot GFA is included in ESPM

Portfolio Manager ID	Property Name	Energy Current Date	Site EUI (kBtu/ft ²)	Current Weather Normalized Site EUI (kBtu/ft ²)
			98	100
Parking Area & EV Charger Correction - if parking area or EV charger energy use is included in ESPM reported values.				
Parking Area Type	Parking SF	Included in ESPM GFA?	kBtu/SF allowance	Parking kBtu
<i>Completely Enclosed</i>	10,000		6.687	66,870
<i>Partially Enclosed</i>	10,000		4.268	42,680
<i>Open Parking Lot</i>	10,000		0.415	4,150
EV Charger Type	# of Chargers		kBtu/charger allowance	Charger kBtu
<i>Level 1</i>	10		8,663	86,630
<i>Level 2</i>	10		8,663	86,630
<i>Level 3 (DC Fast)</i>	10		25,549	255,490
ESPM GFA, SF	GFA w/o Parking, SF	Parking Allowance kBtu	Charger Allowance kBtu	Corrected WN-EUI
100,000	100,000	113,700	428,750	94.6

Energy Professional Responsibilities Benchmarking – EUI Reporting

- For Tier 2 buildings and Tier 1 buildings with $EUI \leq EUI \text{ target}$
 - EUI is only reported once, before the compliance date, as the Official EUI
- For Tier 1 buildings with $EUI > EUI \text{ target}$
 - EUI reporting is not a one-time event!
 - Initial EUI – at least 180 days before compliance date
 - Official EUI – by compliance date
 - Annual EUI – every 12 months as needed
 - Final EUI – within 15 months of final EEM implementation
- Report updated EUI values on Form C, along with info about the progress of EEM implementation on Form E or Form L

Energy Professional Responsibilities

Reviewing O&M and EMP - importance

- O&M: Operations and Maintenance Programs
 - Routine checks to make sure equipment is operating as intended
 - Scheduled equipment maintenance to ensure function and longevity
- EMP: Energy Management Plan
 - Record of energy use and energy-using equipment
 - Who to call when equipment needs parts or service
 - When equipment needs to be replaced, and what will replace it
- **O&M and EMP work may not be as flashy as benchmarking**
 - **But it's an important part of OR BPS**
 - Helps ensure energy use isn't higher than it should be
 - Helps people plan ahead to install energy efficient equipment

Energy Professional Responsibilities

Reviewing O&M and EMP - reporting

- Tier 1 buildings must submit O&M and EMP Checklists
 - QP or QEA may fill these out
 - Checklists not available yet, will be in the online portal
 - Exactly as on the last pages of these guidance documents:
 - [BPS 007 – Operations and Maintenance Programs](#)
 - [BPS 008 – Energy Management Plans](#)
- Tier 1 buildings must also keep O&M records and EMP reports available
 - OR BPS may ask to review them

Energy Professional Responsibilities

Reviewing O&M and EMP

- How rigorous should the QP/QEA be when filling out checklists?
 - Do not lose this opportunity by only going through the motions
 - Don't just take the building owner's or facility manager's word on work done
 - Give feedback and request improvements
- Verify O&M procedures, EMP records
 - View task lists, reports, logs, BMS settings, equipment lists, etc.
 - Compare O&M and EMP work to what's in the [OR BPS O&M and EMP Tool](#)
- Or use the [OR BPS O&M and EMP Tool](#) to develop a new program, then fill out the checklists

Pause to open OR BPS O&M and EMP Tool for a quick overview

Energy Professional Responsibilities

Energy Auditing – Logistics

- Energy audits are required for Tier 1 buildings that don't meet target
 - Only a QEA may perform energy audits
 - Must be **ASHRAE Level 2** audits
- Energy audit results must be submitted by the compliance date for all compliance paths
 - Energy Audit Report – comprehensive audit results
 - Form E: Energy Audit – summary of cost-effective EEMs (simple payback < EUL)
 - Form L: Life Cycle Cost Assessment – more sophisticated evaluation of EEMs that reflects financing costs, tax incentives, implementation over time, etc.
 - Required if following IC w/CC compliance path, but may be done if following any path

Energy Professional Responsibilities

Energy Auditing – Energy Audit Reports

- QEA must do an **ASHRAE Level 2 audit** and **turn in an audit report**
- Report must include:
 - Description of building and equipment
 - General, Envelope, HVAC, Water Heating, Lighting, Plug Loads, Refrigeration, Process
 - Include equipment make, model, age, condition, capacity, efficiency, operation, etc.
 - Graphs and tables of monthly energy use by fuel type
 - Estimated energy end-uses for heating, cooling, water heating, lighting, etc.
 - Potential EEMs
 - Measure description, base case assumptions, measure assumptions, calculation methodology, cost assumptions, energy & cost savings, simple payback
 - **OR BPS does not require equipment replacement before the end of its useful life!**
 - Summary of recommended EEMs, why they were chosen and others were not
 - Energy and cost savings, EUL, cost effectiveness metric, estimated EUI reduction

OR BPS will develop an Energy Audit Report template

Energy Professional Responsibilities

Energy Auditing – EEM Reporting

- QEA must submit Form E: Energy Audit with a summary of EEMs
 - EEM descriptions
 - EEM effective useful life
 - EEM energy savings by fuel type
 - Overall EEM energy savings on an EUI basis, kBtu/SF
 - EEM lifetime GHG emission reductions, based on emissions factors from OR BPS
 - EEM energy cost savings (can be based on blended energy rates for each fuel)
 - EEM measure costs, including capital and labor costs
 - Potential incentive amount for each EEM
 - Simple payback for each EEM, with and without incentives
 - Expected implementation dates
- **Form E may need to be resubmitted to track implementation dates of EEMs**
 - Submitted with Form C updates for EUI
- We are still working out how to accept Form E information
 - May be part of online portal, or may be submitted via Audit Template, or both

Energy Professional Responsibilities

Energy Auditing – Life Cycle Cost Assessments

- **LCCA MUST be done by a QEA if following the IC w/CC path** where EEMs are implemented after the compliance date
 - **May** be done if following any compliance path, used to refine cost-effective EEMs
- In-depth analysis of measure costs, should include the following:
 - Energy use and remaining life of existing equipment
 - Cost estimates of EEM equipment, design, analyze, and commissioning
 - Energy and cost savings over EEM's Effective Useful Life (EUL)
 - Maintenance expense changes for each EEM
 - Financing costs, including interest and fees
 - Tax credits and write-offs
 - Rebates or incentives from utilities or other entities
 - **OR BPS does not require equipment replacement before the end of its useful life.**
- OR BPS has not yet put together a form for the portal, but we will.

Energy Professional Responsibilities

Energy Auditing – Using Previous Audits

- Buildings may have previous energy audits – can they be used?
 - **Yes**, if completed less than five years before submission to OR BPS, **but**:
 - Must have been an ASHRAE Level 2 audit
 - Must be submitted by an OR BPS QEA who did the audit or will vouch for it
 - Must be submitted with some supplemental information:
 - Were any audit measures already implemented, and if so, when?
 - If measures weren't implemented, why not?
 - Did anything else change in the building? If equipment, operations, or occupancy changed, how does that change building energy use and measure savings estimates?
 - Do measures have interactive effects on energy savings? Have interactive effects been accounted for between any implemented and unimplemented measures?
 - **OR BPS reserves the right to reject previous audits if changes since the audit are deemed too significant**

Energy Professional Responsibilities

Decarbonization Plans

- Purpose of a decarbonization plan is determine how to eliminate or reduce the use of fossil fuels in district plants
 - Often includes retrofit work in buildings being served, not just the central plant
- For district systems providing hot water, steam or chilled water to **at least three buildings with at least 100,000 SF of combined GFA**
 - Could be submitted in place of an energy audit
 - Only expected if a district system has already developed a decarbonization plan
- OR BPS allows a QP or a QEA to submit decarbonization plans
- Please refer to guidance document [BPS 012 – Decarbonization Plans](#)
 - Lays out what a decarbonization plan should include, and a schedule for plan implementation and reporting

INCENTIVES: ECAPP & BERI

- ECAPP: Incentive funding for planning activities (e.g. benchmarking or energy audit)
 - Tier 1 buildings: up to \$35,000 or \$50,000 (depending on size)
 - Tier 2 buildings: up to \$10,000

ECAPP Round 2 will reopen in May (approx. \$1.2m available)

- BERI: Incentive funding for installation of energy efficiency measures
 - Tier 1 buildings: up to \$100,000
 - Tier 2 buildings: up to \$50,000

BERI update coming soon

REQUIREMENTS FOR ECAPP

Items to work on now!

- **Tier 1 buildings only** - Hire a QP (Tier 2 buildings do not need an energy pro to apply for ECAPP)
 - Gather energy data
 - Input into Energy Star Portfolio Manager
 - Fill out ODOE Target Tool
 - Determine if WN-EUI is 15 units above EUI_t:
 - If the WN-EUI is 15 units above EUI_t, the building is eligible to apply for ECAPP



REQUIREMENTS FOR BERI

Items to work on now!

- Hire a QP (Tier 1) or QEM (Tier 2)
 - Gather energy data
 - Input into Energy Star Portfolio Manager
 - Fill out ODOE Target Tool
 - Determine if WN-EUI is above EUI_t:
 - If the WN-EUI exceeds the EUI_t, the building is eligible to apply for BERI



BERI: Hire a Qualified Energy Auditor

Items to work on now!

- Hire a QEA
 - Perform an Energy Audit ASHRAE Level 1.5
 - Fill out Form E
 - Develop project plan

Be ready when BERI round 2 is open!



OR BPS Resources

Guidance Documents:

- BPS 001 – Tier 1 and Tier 2 Compliance
- BPS 002 – Exemptions and Historic Buildings
- BPS 003 – Finding Energy Use Intensity Target
- BPS 004 – Calculating Energy Use Intensity
- BPS 005 – Energy Audits and LCCAs
- BPS 006 – Energy Professionals
- BPS 007 – Operations and Maintenance Programs
- BPS 008 – Energy Management Plans
- BPS 009 – Grouped Buildings or Campuses
- BPS 010 – Incentives and Penalties
- BPS 011 – Application to Tribal and Federal Buildings
- BPS 012 – Decarbonization Plans

Additional Resources:

- [Property Inventory List](#)
- [Energy Professional Listing](#)
- [Form Q](#)
- [EUIt Target Tool](#)
- [O&M and EMP Tool](#)
- [Energy Star Portfolio Manager](#)
- [Incentive Opportunities](#)
- [Stakeholder Engagement](#)

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**Thank you
for helping to make
OR BPS a success**

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