



# 2025

*Supporting  
2022 Energy  
Code and  
2025 Energy  
Code  
Updates*

## Introduction to CABEC Mentoring Program

11/5/24



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## OVERVIEW

Oversight for the Certified Energy Analyst (CEA) and Associate Energy Analyst Accreditation (AEA) Mentoring Program has been delegated to the California Association of Building Energy Consultants (CABEC). CABEC improves the practice of energy consulting by encouraging its members to participate in a continuing education program of professional development. The education program covers: The State of California's building energy regulations and analysis, energy conservation technologies, ethics, compliance documentation, and any relevant topics that will develop the professional standards of those engaged in energy consulting.

The goal of the CABEC Mentoring Program is to pair seasoned and certified CEAs who are also CABEC Members with individuals currently in pursuit of certification. The mentor will share experiences and practical knowledge to supplement the mentee's development while s/he completes the training and development programs that are available through Energy Code Ace ([www.energycodeace.com](http://www.energycodeace.com)) and others. While the mentoring program is intended to be customized to the preferences of the mentorship pairing, it is structured around Monthly Mentoring Meetings, which are a series of courses and application activities tied to the five competencies covered in the CEA/AEA multiple choice exam.

### ***What is a Certified Energy Analyst (CEA) and Associate Energy Analyst (AEA)?***

**Certified Energy Analysts (CEA)** are professionals who have studied and worked in the field of building energy efficiency and energy code compliance pertinent to the California Code of Regulations, Title 24, Part 6. They have passed two exams (multiple choice and modeling exam) that represent an achieved level of professional competency. These experts can help individuals and businesses reduce their building energy needs and costs. This includes reducing the amount of energy used in residential/commercial buildings and switching to alternative energy sources such as heat pump equipment and renewables (photovoltaics, battery energy storage systems and/or solar thermal systems). Most energy analysts apply their knowledge to serving a large region or possibly the entire state of California.

Practically speaking, in California, CEAs often determine which energy compliance measures are needed to meet the state energy efficiency requirements and prepare the necessary energy code compliance documentation to submit as part of a builder's permit application. An energy analyst uses California Energy Commission-approved compliance software to identify the energy efficiency measures, including solar water heating, that would be most effective for a building.

The **Associate Energy Analyst (AEA) accreditation** is targeted to professionals who work closely with the California Building Energy Efficiency Standards as they gain the work experience or energy modeling expertise needed to become full Certified Energy Analysts (CEAs). This would include but not be limited to candidates new to the energy industry, California Energy Commission staff, utility staff, Building Officials, Architects, Engineers, Manufacturers and similar. There will be separate AEA accreditations for the residential and nonresidential energy standards.

The AEA provides professional recognition for passing the multiple-choice portion of the rigorous CEA exams without CEU's or direct work experience requirement.

### ***What does it take to become a CEA and an AEA?***

The **Certified Energy Analyst (CEA)** and **Associate Energy Analyst (AEA) accreditation** program is a natural outgrowth of the CABEC Statement of Purpose and is officially recognized by the California Energy Commission for establishing a professional standard as well as providing an important link in energy compliance. The primary goal of the CEA/AEA program is to maintain and manage professional credentials for those who assist the building industry in meeting state energy standards.

The CEA certification program is designed to benefit energy analysts and their clients in the design / construction community by creating a consistent and recognizable standard of achievement. The CEA certification represents the energy analyst's level of knowledge, experience, expertise and demonstrates a commitment to maintaining a high degree of professional excellence pertaining to the Building Energy Efficiency Standards. Separate certification is offered for the Residential and Nonresidential Standards.

### ***How does the mentoring program work?***

Mentor interactions are the primary feature of the program that distinguishes it from other educational offerings. Energy analysts embark on a varied program for developing the competencies needed for certification, with most activities being self-directed. Mentor interactions are planned at key points within each Monthly Mentoring Meeting, during or following a block of completed training. These interactions provide students with an opportunity to clarify and confirm any outstanding questions from the training, and to receive guidance with feedback from a certified energy analyst in a way that is tailored to the learner's needs.

There are many ways to customize mentoring interactions, including variations on the number of participants, frequency and timing of the interactions, and the information exchanged. Mentoring sessions may occur in person if participants are geographically close, or in a combination of telephone and online meetings; these are currently supported as online meetings. Mentors and Mentees will need access to an online meeting platform to facilitate online interactions. In addition, mentors may require support materials for each interaction, including sample learning objectives, practice activities and exercises, and recommended review topics related to the coursework in each learning module. In most cases these have been created for you and are included in your coaching guides for each Monthly Mentoring Meeting.

Each Monthly Mentoring Meeting is designed to map to the CEA/AEA exam competencies. To facilitate mentorship in a structured way, each block offers suggested opportunities for analysts to meet with a mentor to touch base or debrief about a sample project they've been working on. For example, in the Modeling Block, analysts complete sample projects as a downloadable self-study. When they are complete with the project they'll debrief with their mentor.

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## **BENEFITS, ROLES, RESPONSIBILITIES OF A MENTORING RELATIONSHIP**

Mentoring is a special partnership between two people based on commitment to the mentoring process, common goals and expectations, focus, mutual trust and respect. The mentoring relationship allows for the transfer of knowledge and skills from one energy consultant to others, thus benefiting the greater good.

Both the mentor and the mentee give and grow in the mentoring process. The mentee can learn valuable knowledge from the mentor's expertise, lessons learned, and competencies can be strengthened in opportunity areas. Mentees will have the opportunity to establish valuable connections with more experienced energy consultants. Mentors often find that they solidify their own knowledge in the process of preparing to share it with others.

The success of mentoring will depend on clearly defined roles and expectations in addition to the participants' awareness of the benefits of participating in the program.

### ***Benefits of Mentoring for the Mentor:***

- Renews enthusiasm for the role of expert
- Obtains a greater understanding of struggles of less experienced energy consultants
- Enhances skills in coaching, counseling, and listening
- Develops and practices a more personal style of leadership
- Demonstrates expertise and shares knowledge
- Personal satisfaction of sharing their skills and experience with a willing learner
- Possible Mentee internship/employment opportunities with mentor company

### ***Benefits of Mentoring for the Mentee:***

- Gains sharper focus on what is needed to grow professionally
- Furthers development as a professional
- Gains capacity to translate values and strategies into productive actions
- Complements ongoing formal study, training and additional development activities
- Gains career development opportunities
- Gets assistance with ideas and honest feedback
- Possible Mentee internship/employment opportunities with mentor company

As participants reflect on being mentored, time should be devoted to determining the qualities desired in a mentor and what you would like to gain from the partnership.

### ***Responsibilities – Mentor:***

- Support CABEC's mission, vision, and goals
- Attend online 1-hour Monthly Mentoring Meeting including Mentoring Program Manager and all other mentors
  - Commit to presenting, at least, one of the prescribed monthly training meetings per year
  - One-on-one meetings (typically supported online or via phone calls) with mentee pods and engage in prescribed mentoring activities after monthly meetings
- Willingly share your experience
  - Explain how the Mentoring Program is structured
  - Explain how Mentee Pods work
  - Offer encouragement through genuine positive reinforcement
  - Provide open and candid feedback

- o Share lessons learned and stories from your own career
- o Look for experiences that will stretch the mentee
- Let the Mentoring Program Manager at CABEC know as soon as possible if you are having a problem connecting with your mentee
- Estimated monthly time involvement is 4-6 hours per month.

***Responsibilities – Mentee:***

- Meet with mentor and engage in mentoring activities as prescribed
- Discuss individual development planning with the mentor
- Attend (11) 1-hour Monthly Mentoring Meeting in addition to Mentor/Mentee pod training meetings as scheduled by the mentor
- Be proactive about contacting your mentor and attending scheduled meetings
- Be prepared for every meeting and come with questions
  - o Respect the mentor’s time and resources
  - o Review all mentoring documents that are you provided
  - o Mentors are very busy people and have generously volunteered to donate time
  - o Commit to self-development
  - o Seek advice, opinion, feedback, and direction from the mentor
  - o Assume responsibility for acquiring or improving skills and knowledge
- Be open and honest on goals, expectations, challenges, and concerns
  - o Actively listen and ask questions
  - o Be receptive to constructive criticism/feedback
- Maintain confidentiality
- Stay accessible, committed, and engaged during the length of the program. Understand that if your mentee doesn’t fully engage in all of the above, misses more than (3) consecutive meetings or chronically comes unprepared or doesn’t attend online trainings, the mentee may be asked to leave the program until such time the required commitment can be made. A meeting with the Program Director may be required.
- Provide candid feedback to the mentor on what is working or not working in the mentoring relationship
- Let the Mentoring Program Manager at CABEC know as soon as possible if you are having a problem connecting with your mentor

***Responsibilities – CABEC Mentoring Program Manager:***

- Maintain CABEC Mentoring Program materials
  - o Google Docs (or other as determined by CABEC Executive Director) for materials utilized between CABEC and the mentor/mentee and between mentor and mentee(s); Monthly calendar supporting CABEC Mentoring Monthly Program Meetings; Suggested for coordination of Monthly Debrief and any other meetings between mentor and mentee(s)
  - o CABEC website for CABEC Mentoring Monthly Program Meeting PowerPoint slide decks and sample project material; CABEC Mentoring Program Handbook
- Pair mentor and mentees with consideration to active mentee pods and determine if any new pods are required

- Coordinate monthly CABEC Mentoring Program meetings to support Learning/Flight Paths. Additional monthly meetings may be required as the program grows and not all pods follow the same Learning/Flight Paths. Record these meetings and make available on the CABEC website in the mentoring location for mentors to review and be available for any mentees who could not attend
- Check in the mentors and mentees to confirm everything is going smoothly
- Support any mentee or mentor who is having issues with the CABEC Mentoring Program, or with any mentor and/or any mentees within the program
- Communicate with the CABEC Executive Director and the CABEC Board on progress of the mentoring program and relay any needs or concerns of the program. Further coordination with Jill Marver of PG&E in tandem with the CABEC Executive Director and the CABEC Board to be provided as required

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## PROGRAM DOCUMENTS

The following documents are provided to support a smooth process and continuously improve the mentoring program. A full list of all training and development resources used during the mentoring process can be found in the Development Plan.

### General Mentoring Documents:

- **Introduction to CABEC Mentoring Program** Overview of the mentoring program including expectations of mentee, mentor and mentoring program.
- **Confidentiality and Commitment Agreement** – Agreement that the mentoring program must be a safe environment for mentees and mentors to freely share information with one another. Additionally, is aware of the program attendance and participation requirements.
- **Evaluation (via survey)** – At the end, mentees and mentors will be asked to evaluate the program. Their input will help make any necessary adjustments to ensure the program remains effective.



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# APPENDICES

Appendix A: Schedule Overview for Mentoring Program

Appendix B: Roadmap between CEA Exam Objectives and Flight Plan



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## Appendix A: Schedule Overview

### **Getting Started: Meet your Mentee(s)**

Who: Mentor and any new mentee(s)

When: First meeting with mentee(s)

What: Introduce the mentee(s) to the mentor, the CABEC Mentoring Program, discuss goals, rules of engagement, timelines and fill out initial paperwork

### **Monthly CABEC Mentoring Program Meetings**

Who: Mentor who volunteered for this flight path topic/All Mentees/CABEC Mentoring Program Director

When: Monthly for 11 months of the year

What: Work through flight paths in order; link applicable training to that flight path from ECA to mentees, use mentoring program example project(s) to facilitate application of what they should have learned in previous month's ECA classes

### **Monthly Debrief Pod Check-ins**

Who: Mentor/Mentee(s) pod

When: Monthly or as desired by pod

What: Mentees work on sample/personal projects with activities specific to each Flight Plan and then discuss results and issues with the mentor and other mentees in pod

# Appendix B: Monthly Agenda's

## CABEC 2025 Code Single-family Mentoring Monthly Meeting Calendar

Month	Topic	CEA and AEA Classes/Resources	CEA Activity	AEA Activity	
January	Introduction/ Intro to Modeling	<b>CEA and AEA Classes</b> <ul style="list-style-type: none"> <li>Energy Efficiency Concepts online self-study (OLSS) ??</li> <li>Single-family for Energy Consultants  <a href="https://energycodeace.com/training/?courseId=67561">https://energycodeace.com/training/?courseId=67561</a> <ul style="list-style-type: none"> <li>Date?</li> </ul> </li> </ul>			
		<b>CEA Classes</b> <ul style="list-style-type: none"> <li>Modeling Software for Beginners                             <ul style="list-style-type: none"> <li>Energy Pro  <a href="https://energycodeace.com/training/?courseId=69609">https://energycodeace.com/training/?courseId=69609</a> <ul style="list-style-type: none"> <li>Date?</li> </ul> </li> <li>CBECC-Res  <a href="https://energycodeace.com/training/?courseId=88807">https://energycodeace.com/training/?courseId=88807</a> <ul style="list-style-type: none"> <li>Date?</li> </ul> </li> </ul> </li> </ul>			
		<b>Resources</b> <ul style="list-style-type: none"> <li>Glossary:  <a href="https://energycodeace.com/resources/?itemId=35107">https://energycodeace.com/resources/?itemId=35107</a> </li> <li>What's New:  <a href="https://energycodeace.com/resources/?itemId=66973">https://energycodeace.com/resources/?itemId=66973</a> </li> </ul>			
February	Job Organization and Scope	<b>CEA and AEA Classes</b> <ul style="list-style-type: none"> <li>Introduction to the Performance Approach  <a href="https://energycodeace.com/training/?courseId=101755">https://energycodeace.com/training/?courseId=101755</a> <ul style="list-style-type: none"> <li>Date??</li> </ul> </li> </ul>	Pick a Project		
		<b>CEA Classes</b> <ul style="list-style-type: none"> <li>Single-family Compliance: Modeling  <a href="https://energycodeace.com/training/?courseId=78952">https://energycodeace.com/training/?courseId=78952</a> <ul style="list-style-type: none"> <li>Date??</li> </ul> </li> </ul>			
		<b>CEA and AEA Resources</b> <ul style="list-style-type: none"> <li>Designing Single-Family Homes to Run on Clean Energy  <a href="https://energycodeace.com/resources/?itemId=91857">https://energycodeace.com/resources/?itemId=91857</a> </li> <li>Accessory Dwelling Units:  <a href="https://energycodeace.com/resources/?itemId=91865">https://energycodeace.com/resources/?itemId=91865</a> </li> </ul>			Review PE Checklist
		<b>CEA Resources</b> <ul style="list-style-type: none"> <li>Review CABEC SF Intake Sheet:  <a href="https://cabec.org/index.php?gf-download=2023%2F05%2FCABEC-Singlefamily-Job-Aide-3.pdf&amp;form-id=50&amp;field-id=9&amp;hash=587d694f9f9c1222d1c40e46d33fef6c8c402ef43b33b138c3d20351cdb79b08&amp;TB_iframe=true">https://cabec.org/index.php?gf-download=2023%2F05%2FCABEC-Singlefamily-Job-Aide-3.pdf&amp;form-id=50&amp;field-id=9&amp;hash=587d694f9f9c1222d1c40e46d33fef6c8c402ef43b33b138c3d20351cdb79b08&amp;TB_iframe=true</a> </li> </ul>			
		<b>CEA Other</b> <ul style="list-style-type: none"> <li>Drawing Basics such as  <a href="https://www.youtube.com/watch?v=hNzfPII2AiY">https://www.youtube.com/watch?v=hNzfPII2AiY</a> </li> </ul>			
March	Envelope Opaque	<b>CEA and AEA Classes</b> <ul style="list-style-type: none"> <li>Single-family Envelope:  <a href="https://energycodeace.com/training/?courseId=100517">https://energycodeace.com/training/?courseId=100517</a> <ul style="list-style-type: none"> <li>Date?</li> </ul> </li> </ul>	Research insulation and use Job Aide to complete envelope intake.	Use checklist as homework to verify 2 jobs in your office concentrating on "envelope"	
		<b>CEA Classes</b> <ul style="list-style-type: none"> <li>Code &amp; Coffee (Recorded)                             <ul style="list-style-type: none"> <li>Plan take-offs  <a href="https://www.youtube.com/watch?v=Yri61Nb5NNY&amp;list=PLVH9EjkDaO5kYnIDpK2rXB4K_6WaFBnL2&amp;index=1">https://www.youtube.com/watch?v=Yri61Nb5NNY&amp;list=PLVH9EjkDaO5kYnIDpK2rXB4K_6WaFBnL2&amp;index=1</a> </li> </ul> </li> </ul>			

		<ul style="list-style-type: none"> <li>o (2) ADU sessions <a href="https://www.youtube.com/watch?v=mq_BnSsoteM&amp;list=PLVH9EjkDaO5m4K_Nx2RE7CGSI--XJn64n">https://www.youtube.com/watch?v=mq_BnSsoteM&amp;list=PLVH9EjkDaO5m4K_Nx2RE7CGSI--XJn64n</a></li> </ul> <p><b>CEA and AEA Resources</b></p> <ul style="list-style-type: none"> <li>• Single-Family Envelope Factsheet <a href="https://energycodeace.com/resources/?itemId=116512">https://energycodeace.com/resources/?itemId=116512</a></li> </ul> <p><b>CEA Other</b></p> <ul style="list-style-type: none"> <li>• CABEC Brown Bags <ul style="list-style-type: none"> <li>o #1 Modeling 2023: <a href="https://cabec.org/learning/cabec-2023-brown-bag-webinar-series-1-february-15th-2023-modeling-foundation-up-and-changes-in-the-2022-code/">https://cabec.org/learning/cabec-2023-brown-bag-webinar-series-1-february-15th-2023-modeling-foundation-up-and-changes-in-the-2022-code/</a></li> <li>o #2 Let there be light: <a href="https://cabec.org/learning/cabec-2023-brown-bag-webinar-series-2-march-15th-2023-let-there-be-light/">https://cabec.org/learning/cabec-2023-brown-bag-webinar-series-2-march-15th-2023-let-there-be-light/</a></li> </ul> </li> </ul>		
<b>April</b>	Fenestration	<p><b>CEA and AEA Classes</b></p> <ul style="list-style-type: none"> <li>• Single-family Envelope (OLSS) <a href="https://energycodeace.com/training/?courseId=126947">https://energycodeace.com/training/?courseId=126947</a></li> <li>• Code Breaker: <b>SPECIAL EVENT</b> <ul style="list-style-type: none"> <li>o Code Breaker ADU</li> <li>o Code Breaker QII</li> </ul> </li> </ul> <p><b>CEA Classes</b></p> <ul style="list-style-type: none"> <li>• Code &amp; Coffee (Recorded) <ul style="list-style-type: none"> <li>o Shading <a href="https://www.youtube.com/@energycodeace2115">https://www.youtube.com/@energycodeace2115</a></li> <li>o 2 story <a href="https://youtube.com/watch?v=RvX1PieUifE&amp;feature=shares">https://youtube.com/watch?v=RvX1PieUifE&amp;feature=shares</a></li> <li>o E+E+A <a href="https://youtube.com/watch?v=E1qg5M1iagc&amp;feature=shares">https://youtube.com/watch?v=E1qg5M1iagc&amp;feature=shares</a></li> </ul> </li> </ul> <p><b>CEA and AEA Resources</b></p> <ul style="list-style-type: none"> <li>• Insulation Guide <a href="https://energycodeace.com/download/82560/file_path/fieldList/insulation-guide.pdf">https://energycodeace.com/download/82560/file_path/fieldList/insulation-guide.pdf</a></li> </ul>	Model windows using personal project.	Use checklist as homework to verify 2 jobs in your office concentrating on “fenestration”
<b>May</b>	Renewables	<p><b>CEA and AEA Classes</b></p> <ul style="list-style-type: none"> <li>• Single-Family Solar &amp; Battery (half-day) <a href="https://energycodeace.com/training/?courseId=67760">https://energycodeace.com/training/?courseId=67760</a> <ul style="list-style-type: none"> <li>o Date?</li> </ul> </li> <li>• Single-family Architect <a href="https://energycodeace.com/training/?courseId=71994">https://energycodeace.com/training/?courseId=71994</a> <ul style="list-style-type: none"> <li>o Date?</li> </ul> </li> </ul> <p><b>CEA Classes</b></p> <ul style="list-style-type: none"> <li>• Code &amp; Coffee on PV (Recorded): <a href="https://www.youtube.com/watch?v=FAybe0QTSul&amp;list=PLVH9EjkDaO5lUjAj9tUJ9hljORTXJPukl&amp;index=1">https://www.youtube.com/watch?v=FAybe0QTSul&amp;list=PLVH9EjkDaO5lUjAj9tUJ9hljORTXJPukl&amp;index=1</a></li> </ul> <p><b>CEA and AEA Resources</b></p> <ul style="list-style-type: none"> <li>• Single-family PV and Battery <a href="https://energycodeace.com/resources/?itemId=116331">https://energycodeace.com/resources/?itemId=116331</a></li> </ul> <p><b>Other</b></p>	Model PV, battery and solar readiness using personal project.	Use checklist as homework to verify 2 jobs in your office concentrating on “renewables”
<b>June</b>	HVAC	<p><b>CEA &amp; AEA Classes</b></p> <ul style="list-style-type: none"> <li>• Single-Family Mechanical (half-day): <a href="https://energycodeace.com/training/?courseId=71187">https://energycodeace.com/training/?courseId=71187</a> <ul style="list-style-type: none"> <li>o Date?</li> </ul> </li> <li>• Residential Standards for HVAC Contractors Designer/Estimators: <a href="https://energycodeace.com/training/?courseId=64330">https://energycodeace.com/training/?courseId=64330</a> <ul style="list-style-type: none"> <li>o Date?</li> </ul> </li> </ul>	Model heating and cooling systems for personal project.	Use checklist as homework to verify 2 jobs in your office

		<p><b>CEA Classes</b></p> <ul style="list-style-type: none"> <li>Code &amp; Coffee on HVAC (Recorded)  <a href="https://www.youtube.com/watch?v=4KMh2yQXadQ&amp;list=PLVH9EjkDaO5kYnIDpK2rXB4K_6WaFBnL2&amp;index=3">https://www.youtube.com/watch?v=4KMh2yQXadQ&amp;list=PLVH9EjkDaO5kYnIDpK2rXB4K_6WaFBnL2&amp;index=3</a></li> </ul> <p><b>CEA and AEA Resources</b></p> <ul style="list-style-type: none"> <li>Just the Basics: HERS Verification:  <a href="https://energycodeace.com/resources/?itemId=106223">https://energycodeace.com/resources/?itemId=106223</a></li> <li>HVAC Additions and Alterations:  <a href="https://energycodeace.com/resources/?itemId=78949">https://energycodeace.com/resources/?itemId=78949</a></li> <li>Electric Readiness:  <a href="https://energycodeace.com/resources/?itemId=91861">https://energycodeace.com/resources/?itemId=91861</a></li> <li>Equipment Min. Efficiency:  <a href="https://energycodeace.com/resources/?itemId=67830">https://energycodeace.com/resources/?itemId=67830</a></li> </ul> <p><b>CEA and AEA Other</b></p> <ul style="list-style-type: none"> <li>Reach Codes: <a href="http://www.localenergycodes.com">www.localenergycodes.com</a></li> <li>AHRI:  <a href="https://www.ahridirectory.org/NewSearch?programId=68&amp;searchTypeId=3&amp;productTypeId=1">https://www.ahridirectory.org/NewSearch?programId=68&amp;searchTypeId=3&amp;productTypeId=1</a></li> </ul>		concentrating on "HVAC"
July	IAQ	<p><b>CEA and AEA Classes</b></p> <ul style="list-style-type: none"> <li>Single-Family Heating, Ventilation and AC (OLSS)  <a href="https://energycodeace.com/training/?courseId=120491">https://energycodeace.com/training/?courseId=120491</a></li> <li>HERS (OLSS - 2019)  <a href="https://energycodeace.com/training/?courseId=33072">https://energycodeace.com/training/?courseId=33072</a></li> </ul> <p><b>CEA Classes</b></p> <ul style="list-style-type: none"> <li>C&amp;C: Townhomes (Recorded):  <a href="https://youtube.com/watch?v=kZeNicRINtg&amp;feature=shares">https://youtube.com/watch?v=kZeNicRINtg&amp;feature=shares</a></li> </ul> <p><b>CEA and AEA Resources</b></p> <ul style="list-style-type: none"> <li>Mandatory Noteblock:  <a href="https://energycodeace.com/resources/?itemId=82316">https://energycodeace.com/resources/?itemId=82316</a></li> </ul> <p><b>CEA and AEA Other</b></p> <ul style="list-style-type: none"> <li>Brown Bag: Breath of Fresh Air (IAQ):  <a href="https://attendee.gotowebinar.com/recording/6085273924792863918">https://attendee.gotowebinar.com/recording/6085273924792863918</a></li> </ul>	Model IAQ using personal project.	Use checklist as homework to verify 2 jobs in your office concentrating on "IAQ"
August	DHW	<p><b>CEA and AEA Classes</b></p> <ul style="list-style-type: none"> <li>Modeling Heat pump DHW (OLSS)  <a href="https://energycodeace.com/training/?courseId=68388">https://energycodeace.com/training/?courseId=68388</a></li> </ul> <p><b>CEA and AEA Resources</b></p> <ul style="list-style-type: none"> <li>Residential DHW:  <a href="https://energycodeace.com/resources/?itemId=156695">https://energycodeace.com/resources/?itemId=156695</a></li> <li>Compliance Baseline  <a href="https://energycodeace.com/resources/?itemId=103024">https://energycodeace.com/resources/?itemId=103024</a>  <a href="https://energycodeace.com/resources/?itemId=124100">https://energycodeace.com/resources/?itemId=124100</a>  <a href="https://energycodeace.com/resources/?itemId=103036">https://energycodeace.com/resources/?itemId=103036</a>  <a href="https://energycodeace.com/resources/?itemId=124103">https://energycodeace.com/resources/?itemId=124103</a></li> </ul> <p><b>CEA and AEA Other</b></p> <ul style="list-style-type: none"> <li>Brown Bag: That's too Darn Hot (water heating):  <a href="https://attendee.gotowebinar.com/recording/1203509367057411840">https://attendee.gotowebinar.com/recording/1203509367057411840</a></li> </ul>	Model DHW using personal project.	Use checklist as homework to verify 2 jobs in your office concentrating on "DHW"
September	Lighting	<p><b>CEA and AEA Classes</b></p>	Research lighting products.	Use checklist as homework to verify 2 jobs in your office

		<ul style="list-style-type: none"> <li>Res lighting class <a href="https://energycodeace.com/training/?courseId=68732">https://energycodeace.com/training/?courseId=68732</a> o Date?</li> </ul> <p><b>CEA Classes</b></p> <ul style="list-style-type: none"> <li>Modeling Tips: <a href="https://energycodeace.com/training/?courseId=78952">https://energycodeace.com/training/?courseId=78952</a> o Date?</li> </ul> <p><b>CEA and AEA Resources</b></p> <ul style="list-style-type: none"> <li>Residential Lighting: <a href="https://energycodeace.com/resources/?itemId=70413">https://energycodeace.com/resources/?itemId=70413</a></li> <li>Title 20 versus Title 24: <a href="https://energycodeace.com/resources/?itemId=143958">https://energycodeace.com/resources/?itemId=143958</a></li> </ul> <p><b>Other</b> Sign up for the Blueprint: <a href="https://www.energy.ca.gov/newsroom/blueprint-newsletter">https://www.energy.ca.gov/newsroom/blueprint-newsletter</a></p>		concentrating on "lighting"
<b>October</b>	Modeling	<p><b>CEA and AEA Classes</b></p> <ul style="list-style-type: none"> <li>Analyzing the CF1R (half day) <a href="https://energycodeace.com/training/?courseId=78954">https://energycodeace.com/training/?courseId=78954</a> o Date?</li> </ul> <p><b>CEA Classes</b></p> <ul style="list-style-type: none"> <li>CBECC-Res Advanced: <a href="https://energycodeace.com/training/?courseId=25721">https://energycodeace.com/training/?courseId=25721</a> o Date?</li> <li>Energy Pro Advanced: <a href="https://energycodeace.com/training/?courseId=78051">https://energycodeace.com/training/?courseId=78051</a> o Date?</li> </ul> <p><b>CEA and AEA Resources</b></p> <ul style="list-style-type: none"> <li>Plans Examiner Checklist: <a href="https://energycodeace.com/resources/?itemId=73707">https://energycodeace.com/resources/?itemId=73707</a></li> </ul>	Present 3 compliance approaches for personal project.	
<b>November</b>	CEA	<p><b>CEA and AEA Classes</b></p> <ul style="list-style-type: none"> <li>Prepare for the CEA o Date?</li> <li>Brown Bag: 2018 How to Prepare to Pass the Res CEA Exam</li> </ul>	Sign up for CEA exam	

# CABEC 2025 Code Nonresidential and Multifamily Mentoring Monthly Meeting Calendar

Month	Topic	CEA and AEA Classes/Resources	CEA Activity	AEA Activity
January	Introduction	<p><b>CEA Classes</b></p> <ul style="list-style-type: none"> <li>Energy Efficiency Concepts online self study (OLSS) ??</li> <li>Software (any of the following):                             <ul style="list-style-type: none"> <li>EP Intro: <a href="https://energycodeace.com/training/?courseId=73518">https://energycodeace.com/training/?courseId=73518</a> ▪ Date?</li> <li>EP Advanced: <a href="https://energycodeace.com/training/?courseId=78053">https://energycodeace.com/training/?courseId=78053</a> ▪ Date?</li> <li>CBECC (SCE??)</li> </ul> </li> <li>IESVE online class - PG&amp;E <a href="https://pge.docebosaas.com/learn/course/external/view/classroom/2803/title-24-compliance-modeling-decarbonization-with-iesve-software">https://pge.docebosaas.com/learn/course/external/view/classroom/2803/title-24-compliance-modeling-decarbonization-with-iesve-software</a> ▪ Date?</li> </ul> <p><b>AEA Classes</b></p> <ul style="list-style-type: none"> <li>Energy Efficiency Concepts online self study (OLSS) ??</li> <li>Code Breaker: Special Event ZNCD and Compliance Forms</li> <li>What's New for 2025</li> </ul> <p><b>CEA/AEA Resources</b></p> <ul style="list-style-type: none"> <li>Glossary: <a href="https://energycodeace.com/resources/?itemId=35107">https://energycodeace.com/resources/?itemId=35107</a></li> <li>What's New: <a href="https://energycodeace.com/resources/?itemId=66025">https://energycodeace.com/resources/?itemId=66025</a> and <a href="https://energycodeace.com/resources/?itemId=66709">https://energycodeace.com/resources/?itemId=66709</a></li> <li>What's Changed: <a href="https://energycodeace.com/resources/?itemId=63690">https://energycodeace.com/resources/?itemId=63690</a> and <a href="https://energycodeace.com/resources/?itemId=63695">https://energycodeace.com/resources/?itemId=63695</a></li> </ul> <p><b>CEA/AEA Other</b></p> <ul style="list-style-type: none"> <li>Reference Ace: <a href="#">2022 Reference Ace Get comfortable with what is there</a></li> <li>Be aware of 2025 code development: <a href="https://title24stakeholders.com/">https://title24stakeholders.com/</a> and <a href="https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2025-building-energy-efficiency">https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2025-building-energy-efficiency</a></li> <li>CalBEM paper on Energy Modeling roles: <a href="https://calbem.ibpsa.us/calbem-whitepaper-bem-roles/">https://calbem.ibpsa.us/calbem-whitepaper-bem-roles/</a></li> </ul>		
February	Job Organization and Scope	<p><b>CEA/AEA Classes</b></p> <ul style="list-style-type: none"> <li>Intro to Performance: <a href="https://energycodeace.com/training/?courseId=101712">https://energycodeace.com/training/?courseId=101712</a> o Date?</li> <li>Compliance Modeling: <a href="https://energycodeace.com/training/?courseId=73523">https://energycodeace.com/training/?courseId=73523</a> o Date?</li> <li>NR/MF for Energy Consultants: <a href="https://energycodeace.com/training/?courseId=65498">https://energycodeace.com/training/?courseId=65498</a> o Date?</li> </ul> <p><b>CEA Classes</b></p> <ul style="list-style-type: none"> <li>MF Modeling OLSS and Live: ???</li> </ul> <p><b>CEA/AEA Resources</b></p> <ul style="list-style-type: none"> <li>Checklist: Multifamily &amp; Nonresidential – Plans Examiner – 2022: <a href="https://energycodeace.com/resources/?itemId=74355">https://energycodeace.com/resources/?itemId=74355</a></li> <li>Review CABEC SF Intake Sheet: <a href="https://cabec.org/index.php?gf-download=2023%2F05%2FCAB-EC-Singlefamily-Job-Aide-3.pdf&amp;form-id=50&amp;field-id=9&amp;hash=587d694f9f9c1222d1c40e46d33fef6c8c402ef43b33b138c3d20351cdb79b08&amp;TB_iframe=true">https://cabec.org/index.php?gf-download=2023%2F05%2FCAB-EC-Singlefamily-Job-Aide-3.pdf&amp;form-id=50&amp;field-id=9&amp;hash=587d694f9f9c1222d1c40e46d33fef6c8c402ef43b33b138c3d20351cdb79b08&amp;TB_iframe=true</a></li> <li>Reference Ace:                             <ul style="list-style-type: none"> <li>Title 24 Part 1: Admin §10-101 through 10-115</li> <li>Title 24 Part 6: Subchapter 1                                     <ul style="list-style-type: none"> <li>Make a copy of Table 100.0-A and use as template</li> </ul> </li> </ul> </li> </ul>	<p>Review how we will use various projects for monthly activities</p> <p>Set up intake file for use in modeling exercises</p>	<p>Use PE checklist and review “scope” and “general” on at least 2 projects in your office.</p>

		<ul style="list-style-type: none"> <li>o NR/MF Manual <ul style="list-style-type: none"> <li>▪ Chapter 1, 2 and 12</li> <li>▪ MF: 11.1-11.2</li> </ul> </li> </ul>		
		<p><b>CEA Resources (EXTRA CREDIT FOR AEA)</b></p> <ul style="list-style-type: none"> <li>• Reference Ace: <ul style="list-style-type: none"> <li>o NR/MF ACM <ul style="list-style-type: none"> <li>▪ Chapter 1</li> <li>▪ 5.1, 5.2, 5.3 and 5.4 – Overview</li> <li>▪ 6.1 and 6.2 – Overview</li> <li>▪ 6.12 – addition/alterations</li> </ul> </li> </ul> </li> </ul>		
		<p><b>CEA/AEA Other</b></p> <ul style="list-style-type: none"> <li>• IF NEEDED: Drawing Basics such as <a href="https://www.youtube.com/watch?v=hNzfPII2AiY">https://www.youtube.com/watch?v=hNzfPII2AiY</a></li> <li>• Read current Regulatory Advisories: <a href="https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/online-resource-center/regulatory">https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/online-resource-center/regulatory</a></li> <li>• Look at current Reach Codes: <a href="https://localenergycodes.com/">https://localenergycodes.com/</a></li> </ul>		
		<p><b>CEA Other</b></p> <ul style="list-style-type: none"> <li>• Explore VCA on ECA website</li> <li>• Download IESVE Handbook and use throughout program: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.iesve.com/corporate/guides/bpm-student-handbook-2023v01.pdf</li> </ul>		
<b>March</b>	Envelope	<p><b>CEA/AEA Classes</b></p> <ul style="list-style-type: none"> <li>• NR Architect: <a href="https://energycodeace.com/training/?courseId=82574">https://energycodeace.com/training/?courseId=82574</a> <ul style="list-style-type: none"> <li>• Date?</li> </ul> </li> <li>• Online building science series: <a href="https://pge.docebosaa.com/learn/course/external/view/learn/2806/building-science-series">https://pge.docebosaa.com/learn/course/external/view/learn/2806/building-science-series</a></li> <li>• Code Breaker: Create <b>special event</b> for NR/MF Envelope</li> </ul> <p><b>CEA/AEA Resources</b></p> <ul style="list-style-type: none"> <li>• Insulation Guide <a href="https://energycodeace.com/download/82560/file_path/fieldList/insulation-guide.pdf">https://energycodeace.com/download/82560/file_path/fieldList/insulation-guide.pdf</a></li> <li>• Nonresidential Envelope 2022: <a href="https://energycodeace.com/resources/?itemId=98073">https://energycodeace.com/resources/?itemId=98073</a></li> <li>• MF Envelope: <a href="https://energycodeace.com/resources/?itemId=214099">https://energycodeace.com/resources/?itemId=214099</a></li> <li>• Reference Ace: <ul style="list-style-type: none"> <li>o Energy Code <ul style="list-style-type: none"> <li>▪ NR and MF: Envelope sections in Table 100.0-A</li> </ul> </li> <li>o NR/MF Manual <ul style="list-style-type: none"> <li>▪ NR: Chapter 3</li> <li>▪ MF: 11.3</li> </ul> </li> </ul> </li> </ul> <p><b>CEA Resources (EXTRA CREDIT FOR AEA)</b></p> <ul style="list-style-type: none"> <li>• Reference Ace: <ul style="list-style-type: none"> <li>o NR/MF ACM <ul style="list-style-type: none"> <li>▪ 5.5 and 5.12</li> <li>▪ 6.5, 6.6, 6.7</li> </ul> </li> </ul> </li> </ul> <p><b>CEA/AEA Other</b></p> <ul style="list-style-type: none"> <li>• Fill out NRCC-ENV based on specific scenario</li> </ul>	Model opaque envelope using personal project.	Use PE checklist and review “envelope” on at least 2 projects in your office.
			Use 3 different window types, 3 different wall types, in 3 different CZ	
<b>April</b>	EPD and Cx	<p><b>CEA/AEA Classes</b></p> <ul style="list-style-type: none"> <li>• Code Breaker: Create <b>special event</b> for Embodied Carbon and CALGreen</li> <li>• Code Breaker: Create <b>special event for</b> MF Overview</li> </ul> <p><b>CEA/AEA Resources</b></p> <ul style="list-style-type: none"> <li>• Nonresidential and Multifamily Building Electrical Power Distribution 2022: <a href="https://energycodeace.com/resources/?itemId=158266">https://energycodeace.com/resources/?itemId=158266</a></li> <li>• Nonresidential Design Review and Commissioning 2022: <a href="https://energycodeace.com/resources/?itemId=132226">https://energycodeace.com/resources/?itemId=132226</a></li> <li>• Reference Ace: <ul style="list-style-type: none"> <li>o Energy Code <ul style="list-style-type: none"> <li>▪ NR and MF: EPD sections in Table 100.0-A</li> <li>▪ 120.8</li> </ul> </li> </ul> </li> </ul>	Create NRCC-CXR for project	Use PE checklist and review “EPD and Cx” on at least 2 projects in your office.



		<ul style="list-style-type: none"> <li>o NR/MF Manual <ul style="list-style-type: none"> <li>▪ NR: Chapter 8 and 13</li> <li>▪ MF: 11.8</li> </ul> </li> </ul>		
		<p><b>CEA Resources (EXTRA CREDIT FOR AEA)</b></p> <ul style="list-style-type: none"> <li>• Reference Ace: <ul style="list-style-type: none"> <li>o NR/MF ACM: <ul style="list-style-type: none"> <li>▪ 5.9</li> <li>▪ 6.9</li> </ul> </li> </ul> </li> </ul>		
		<p><b>CEA/AEA Other</b></p> <ul style="list-style-type: none"> <li>• Fill out NRCC-ELC based on specific scenario</li> </ul>		
<b>May</b>	Renewables	<p><b>CEA/AEA Classes</b></p> <ul style="list-style-type: none"> <li>• NR/MF Solar and Battery: <a href="https://energycodeace.com/training/?courseId=71240">https://energycodeace.com/training/?courseId=71240</a> <ul style="list-style-type: none"> <li>• <b>Date?</b></li> </ul> </li> <li>• Code Breaker: <b>Special event</b> - Solar, Battery and ZNCD</li> </ul>	Do a SARA for project, 2 projects if possible.	Use PE checklist and review "PV. battery, solar readiness" on at least 2 projects in your office.
		<p><b>CEA/AEA Resources</b></p> <ul style="list-style-type: none"> <li>• NR/MF PV and Battery: <a href="https://energycodeace.com/resources/?itemId=116499">https://energycodeace.com/resources/?itemId=116499</a></li> <li>• Reference Ace: <ul style="list-style-type: none"> <li>o Energy Code <ul style="list-style-type: none"> <li>▪ NR and MF: Renewables sections in Table 100.0-A</li> </ul> </li> <li>o NR/MF Manual <ul style="list-style-type: none"> <li>▪ NR: Chapter 9</li> <li>▪ MF: 11.9</li> </ul> </li> </ul> </li> </ul>	Model PV and Battery, try and "trade-away" battery.	
		<p><b>CEA Resources (EXTRA CREDIT FOR AEA)</b></p> <ul style="list-style-type: none"> <li>• Reference Ace: <ul style="list-style-type: none"> <li>o NR/MF ACM <ul style="list-style-type: none"> <li>▪ 5.10</li> <li>▪ 6.3 and 6.4</li> </ul> </li> </ul> </li> </ul>		
		<p><b>CEA/AEA Other</b></p> <ul style="list-style-type: none"> <li>• Explore CEC approved Solar assessment software: <a href="https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/solar-assessment-tools">https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/solar-assessment-tools</a></li> <li>• Fill out NRCC-SAB based on specific scenario</li> </ul>		
<b>June</b>	HVAC	<p><b>CEA/AEA Classes</b></p> <ul style="list-style-type: none"> <li>• NR Small Commercial HVAC: <a href="https://energycodeace.com/training/?courseId=111846">https://energycodeace.com/training/?courseId=111846</a> <ul style="list-style-type: none"> <li>o <b>Date?</b></li> </ul> </li> <li>• Acceptance Testing: <a href="https://energycodeace.com/training/?courseId=78198">https://energycodeace.com/training/?courseId=78198</a> <ul style="list-style-type: none"> <li>o <b>Date?</b></li> </ul> </li> </ul>	Model gas and heat pump HVAC	Use PE checklist and review "HVAC" on at least 2 projects in your office.
		<p><b>CEA/AEA Resources</b></p> <ul style="list-style-type: none"> <li>• NR/MF ATT: <a href="https://energycodeace.com/resources/?itemId=107714">https://energycodeace.com/resources/?itemId=107714</a></li> <li>• Equipment Min. Efficiency: <a href="https://energycodeace.com/resources/?itemId=67830">https://energycodeace.com/resources/?itemId=67830</a></li> <li>• NR Mechanical: <a href="https://energycodeace.com/resources/?itemId=183959">https://energycodeace.com/resources/?itemId=183959</a></li> <li>• Reference Ace: <ul style="list-style-type: none"> <li>o Energy Code <ul style="list-style-type: none"> <li>▪ NR and MF: HVAC sections in Table 100.0-A</li> </ul> </li> <li>o NR/MF Manual <ul style="list-style-type: none"> <li>▪ NR: Chapter 4</li> <li>▪ MF: 11.5</li> </ul> </li> </ul> </li> </ul>		
		<p><b>CEA Resources (EXTRA CREDIT FOR AEA)</b></p> <ul style="list-style-type: none"> <li>• Reference Ace: <ul style="list-style-type: none"> <li>o NR/MF ACM <ul style="list-style-type: none"> <li>▪ 5.1, 5.6</li> <li>▪ 6.8</li> </ul> </li> </ul> </li> </ul>		
		<p><b>CEA/AEA Other</b></p> <ul style="list-style-type: none"> <li>• AHRI: <a href="https://www.ahridirectory.org/NewSearch?programId=68&amp;searchTypeId=3&amp;productTypeId=1">https://www.ahridirectory.org/NewSearch?programId=68&amp;searchTypeId=3&amp;productTypeId=1</a></li> <li>• Fill out NRCC-MCH based on specific scenario</li> </ul>		
<b>July</b>	IAQ	<p><b>CEA/AEA Classes</b></p> <ul style="list-style-type: none"> <li>• HERS (OLSS - 2019) <a href="https://energycodeace.com/training/?courseId=33072">https://energycodeace.com/training/?courseId=33072</a></li> </ul>	Mode DOAS with heat	Use PE checklist and



		<p><b>CEA/AEA Resources</b></p> <ul style="list-style-type: none"> <li>• Just the Basics: HERS Verification: <a href="https://energycodeace.com/resources/?itemId=106223">https://energycodeace.com/resources/?itemId=106223</a></li> <li>• MF Electric Readiness: <a href="https://energycodeace.com/resources/?itemId=91861">https://energycodeace.com/resources/?itemId=91861</a></li> <li>• MF Mechanical: ??</li> <li>• Reference Ace: <ul style="list-style-type: none"> <li>o Energy Code <ul style="list-style-type: none"> <li>▪ NR and MF: IAQ sections in Table 100.0-A</li> </ul> </li> <li>o NR/MF Manual <ul style="list-style-type: none"> <li>▪ NR: Chapter 14</li> <li>▪ MF: 11.4 and 11.10</li> </ul> </li> </ul> </li> </ul> <p><b>CEA Resources (EXTRA CREDIT FOR AEA)</b></p> <ul style="list-style-type: none"> <li>• Reference Ace: <ul style="list-style-type: none"> <li>o NR/MF ACM <ul style="list-style-type: none"> <li>▪ 5.7, 5.8</li> <li>▪ 6.9</li> </ul> </li> </ul> </li> </ul> <p><b>CEA/AEA Other</b></p> <ul style="list-style-type: none"> <li>• MF Kitchen Hood: <ul style="list-style-type: none"> <li>o AHAM: <a href="https://www.aham.org/AHAM/What_We_Do/Kitchen_Range_Hood_Certification.aspx?WebsiteKey=c0a5e5a1-ea1c-42f1-9b84-d62256c16ea2">https://www.aham.org/AHAM/What_We_Do/Kitchen_Range_Hood_Certification.aspx?WebsiteKey=c0a5e5a1-ea1c-42f1-9b84-d62256c16ea2</a> and</li> <li>o HVI: <a href="https://www.hvi.org/hvi-certified-products-directory/">https://www.hvi.org/hvi-certified-products-directory/</a></li> </ul> </li> <li>• Fill out NRCC-MCH based on specific scenario</li> </ul>	recovery, and balanced IAQ in dwelling units	review “IAQ” on at least 2 projects in your office.
August	DHW	<p><b>CEA/AEA Classes</b></p> <ul style="list-style-type: none"> <li>• Modeling Heat pump DHW (OLSS) <a href="https://energycodeace.com/training/?courseId=68388">https://energycodeace.com/training/?courseId=68388</a></li> <li>• Code Breaker: NR HVAC DX Alterations <b>SPECIAL EVENT</b></li> </ul> <p><b>CEA/AEA Resources</b></p> <ul style="list-style-type: none"> <li>• Residential DHW: <a href="https://energycodeace.com/resources/?itemId=156695">https://energycodeace.com/resources/?itemId=156695</a></li> <li>• Reference Ace: <ul style="list-style-type: none"> <li>o Energy Code <ul style="list-style-type: none"> <li>▪ NR and MF: DHW sections in Table 100.0-A</li> </ul> </li> <li>o NR/MF Manual <ul style="list-style-type: none"> <li>▪ NR: Chapter 4</li> <li>▪ MF: 11.6</li> </ul> </li> </ul> </li> </ul> <p><b>CEA Resources (EXTRA CREDIT FOR AEA)</b></p> <ul style="list-style-type: none"> <li>• Reference Ace: <ul style="list-style-type: none"> <li>o NR/MF ACM: 6.11</li> </ul> </li> </ul> <p><b>CEA/AEA Other</b></p> <ul style="list-style-type: none"> <li>• Fill out NRCC-PLB based on specific scenario</li> </ul>	Model central and individual DHW, and solar thermal	Use PE checklist and review “DHW” on at least 2 projects in your office.
September	Lighting	<p><b>CEA/AEA Classes</b></p> <ul style="list-style-type: none"> <li>• Indoor Lighting <ul style="list-style-type: none"> <li>• Compliance Pathways: <a href="https://energycodeace.com/training/?courseId=95804">https://energycodeace.com/training/?courseId=95804</a> <ul style="list-style-type: none"> <li>▪ Date?</li> </ul> </li> <li>• Controls: <a href="https://energycodeace.com/training/?courseId=96078">https://energycodeace.com/training/?courseId=96078</a> <ul style="list-style-type: none"> <li>▪ Date?</li> </ul> </li> </ul> </li> <li>• Outdoor Lighting: <a href="https://energycodeace.com/training/?courseId=96088">https://energycodeace.com/training/?courseId=96088</a> <ul style="list-style-type: none"> <li>• Date?</li> </ul> </li> <li>• Residential Lighting: <a href="https://energycodeace.com/training/?courseId=68732">https://energycodeace.com/training/?courseId=68732</a> <ul style="list-style-type: none"> <li>• Date ?</li> </ul> </li> </ul> <p><b>CEA/AEA Resources</b></p> <ul style="list-style-type: none"> <li>• Residential Lighting: <a href="https://energycodeace.com/resources/?itemId=70413">https://energycodeace.com/resources/?itemId=70413</a></li> <li>• Title 20 versus Title 24: <a href="https://energycodeace.com/resources/?itemId=143958">https://energycodeace.com/resources/?itemId=143958</a></li> <li>• NR/MF Lighting: <a href="https://energycodeace.com/resources/?itemId=174931">https://energycodeace.com/resources/?itemId=174931</a></li> <li>• Reference Ace: <ul style="list-style-type: none"> <li>o Energy Code</li> </ul> </li> </ul>	Model indoor lighting	Use PE checklist and review “lighting” on at least 2 projects in your office.

		<ul style="list-style-type: none"> <li>▪ NR and MF: Lighting sections in Table 100.0-A</li> <li>o NR/MF Manual <ul style="list-style-type: none"> <li>▪ NR: Chapter 5-7</li> <li>▪ MF: 11.7</li> </ul> </li> </ul>		
		<p><b>CEA Resources (EXTRA CREDIT FOR AEA)</b></p> <ul style="list-style-type: none"> <li>● Reference Ace: <ul style="list-style-type: none"> <li>o NR/MF ACM: 5.9</li> </ul> </li> </ul>		
		<p><b>CEA/AEA Other</b></p> <ul style="list-style-type: none"> <li>● Sign up for the Blueprint: <a href="https://www.energy.ca.gov/newsroom/blueprint-newsletter">https://www.energy.ca.gov/newsroom/blueprint-newsletter</a></li> <li>● CLTC Application Guides: <a href="https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/online-resource-center/lighting#accordion-13170">https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/online-resource-center/lighting#accordion-13170</a></li> <li>● Fill out NRCC-LTI or LTO or LTS based on specific scenario</li> </ul>		
<b>October</b>	Covered Process	<p><b>CEA/AEA Classes</b></p> <ul style="list-style-type: none"> <li>● NR/MF PE class: <a href="https://energycodeace.com/training/?courseId=77132">https://energycodeace.com/training/?courseId=77132</a> <ul style="list-style-type: none"> <li>● Date?</li> </ul> </li> <li>● Code Breaker – CEH (<b>SPECIAL EVENT</b>)</li> </ul> <p><b>CEA/AEA Resources</b></p> <ul style="list-style-type: none"> <li>● CEH: <a href="https://energycodeace.com/resources/?itemId=213429">https://energycodeace.com/resources/?itemId=213429</a></li> <li>● Reference Ace: <ul style="list-style-type: none"> <li>o Energy Code <ul style="list-style-type: none"> <li>▪ NR and MF: Covered Process sections in Table 100.0-A</li> </ul> </li> <li>o NR/MF Manual <ul style="list-style-type: none"> <li>▪ NR: Chapter 10</li> </ul> </li> </ul> </li> </ul> <p><b>CEA/AEA Other</b></p> <ul style="list-style-type: none"> <li>● CEC factsheets: <a href="https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/online-resource-center/covered#accordion-12927">https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/online-resource-center/covered#accordion-12927</a></li> <li>● Fill out NRCC-PRC for at least 2 covered processes based on specific scenario</li> </ul>	Model a covered process	Use PE checklist and review “covered process” on at least 2 projects in your office.
<b>November</b>	CEA/AEA	<p><b>CEA/AEA Classes</b></p> <ul style="list-style-type: none"> <li>● Prepare for the NR CEA</li> </ul> <p><b>Other</b></p> <ul style="list-style-type: none"> <li>● Review someone else project and their forms, using the PE checklist</li> </ul>	Review project you did not work on and their forms, using the PE checklist	Use PE checklist on at least 2 projects in your office.

# Appendix C: Roadmap: CEA Exam Single-family Competencies and Objectives mapped to Learning Modules

## Competency 1: Comprehend Key Residential Energy Efficiency Design Concepts and Issues

Demonstrate knowledge of basic heat transfer, residential energy design measures, and how they relate to building energy performance or metrics.

	1 EEC	2 Intro Modeling	3 Envelope Insulation	4 Envelop Opaque	5 Envelope Fenestrati on	5 Renewables	6 HVAC	7 IAQ	8 DHW	9 Lighting	10 Interme diate Modelin g
1.1 Describe methods of heat transfer and ways to maintain comfort conditions within living spaces and energy units.	<ul style="list-style-type: none"> <li>• OLSS EE Concepts</li> </ul>										
1.2 Determine appropriate general methods for reducing building and end-use energy consumption through energy design and energy efficiency.	<ul style="list-style-type: none"> <li>• OLSS EE Concepts</li> <li>• Res Stds EC</li> </ul>		<ul style="list-style-type: none"> <li>• Vshop Res Env &amp; Solar</li> </ul>	<ul style="list-style-type: none"> <li>• Code B ADU Vshop Res Env &amp; Solar</li> </ul>	<ul style="list-style-type: none"> <li>• Vshop Res Env &amp; Solar</li> </ul>	<ul style="list-style-type: none"> <li>• OLSS Res Solar</li> <li>• CodeB Solar</li> <li>• Vshop Res Env &amp; Solar</li> </ul>	<ul style="list-style-type: none"> <li>• OLSS Res HVAC</li> <li>• Vshop Res Mechanical Systems</li> </ul>	<ul style="list-style-type: none"> <li>• OLS S Res Ventilati on</li> </ul>	<ul style="list-style-type: none"> <li>• OLSS Res Water Heating</li> </ul>	<ul style="list-style-type: none"> <li>• Res Ligh ting</li> </ul>	
1.3 Describe envelope/PV design elements and explain how they affect energy design and efficiency	<ul style="list-style-type: none"> <li>• OLSS EE Concepts</li> <li>• Res Stds EC</li> </ul>		<ul style="list-style-type: none"> <li>• Vshop Res Env &amp; Solar</li> </ul>	<ul style="list-style-type: none"> <li>• Code B ADU Vshop Res Env &amp; Solar</li> </ul>	<ul style="list-style-type: none"> <li>• Vshop Res Env &amp; Solar</li> </ul>	<ul style="list-style-type: none"> <li>• OLSS Res Solar</li> <li>• CodeB Solar</li> <li>• Vshop Res Env &amp; Solar</li> </ul>				<ul style="list-style-type: none"> <li>• Res Ligh ting</li> </ul>	
1.4 Describe mechanical and water heating design elements and explain how they affect energy design and efficiency.	<ul style="list-style-type: none"> <li>• OLSS EE Concepts,</li> <li>• Res Stds EC</li> </ul>						<ul style="list-style-type: none"> <li>• OLSS Res HVAC</li> <li>• Vshop Res Mechanical Systems</li> </ul>	<ul style="list-style-type: none"> <li>• OLS S Res Ventilati on</li> </ul>	<ul style="list-style-type: none"> <li>• OLSS Res Water Heating</li> </ul>		
1.5 Describe lighting design elements and explain how they affect energy design and efficiency.	<ul style="list-style-type: none"> <li>• OLSS EE Concepts</li> <li>• Res Stds EC</li> </ul>									<ul style="list-style-type: none"> <li>• Res Ligh ting</li> </ul>	
1.6 Explain what common building energy performance metrics measure, and what factors are included in the calculation of these metrics.	<ul style="list-style-type: none"> <li>• OLSS EE Concepts</li> </ul>										

## Competency 2: Conduct Initial Project Assessment and Determine How to Apply the 2019 California Building Energy Efficiency Standards

Gather preliminary information from drawings, related documents, and the client to determine the nature and scope of the project; determine how to apply the Standards in establishing the correct code requirements and the available energy compliance options.

	1 EEC	2 Intro Modeling	3 Envelope Insulation	4 Envelop Opaque	5 Envelope Fenestratio n	5 Renewable s	6 HVAC	7 IAQ	8 DHW	9 Lighting	10 Intermedia te Modeling
2.1 Explain scope and triggers for specified portions of the Title 24 low-rise residential standards, federal and state appliance standards.	<ul style="list-style-type: none"> <li>Res Stds EC</li> </ul>	<ul style="list-style-type: none"> <li>Res Modeling</li> </ul>	<ul style="list-style-type: none"> <li>Vshop Res Env &amp; Solar</li> </ul>	<ul style="list-style-type: none"> <li>CodeB ADU</li> </ul>	<ul style="list-style-type: none"> <li>Vshop Res Env &amp; Solar</li> <li>CodeB ADU</li> </ul>	<ul style="list-style-type: none"> <li>OLSS Res Solar</li> <li>Vshop Res Env &amp; Solar</li> <li>CodeB ADU</li> <li>CodeB Solar</li> </ul>	<ul style="list-style-type: none"> <li>OLSS Res HVAC</li> <li>Vshop Res Mechanical Systems</li> </ul>	<ul style="list-style-type: none"> <li>OLSS Res Ventilation</li> </ul>	<ul style="list-style-type: none"> <li>OLSS Res Water Heating</li> </ul>	<ul style="list-style-type: none"> <li>Res Lighting</li> </ul>	<ul style="list-style-type: none"> <li>Res Modeling Tips</li> <li>Res Lighting</li> </ul>
2.2 Analyze information about a proposed project (e.g., drawings, related schedules and documents, information from client) to determine scope and key attributes.	<ul style="list-style-type: none"> <li>Res Stds EC</li> </ul>	<ul style="list-style-type: none"> <li>Res Modeling</li> </ul>		<ul style="list-style-type: none"> <li>CodeB ADU</li> </ul>	<ul style="list-style-type: none"> <li>Vshop Res Env &amp; Solar</li> <li>CodeB ADU</li> </ul>	<ul style="list-style-type: none"> <li>CodeB ADU</li> <li>CodeB Solar</li> </ul>					<ul style="list-style-type: none"> <li>Res Modeling Tips</li> </ul>
2.3 Analyze proposed project information to determine which standards apply, possible compliance options and strengths and weaknesses of compliance methods.	<ul style="list-style-type: none"> <li>Res Stds EC</li> </ul>	<ul style="list-style-type: none"> <li>Res Modeling</li> </ul>		<ul style="list-style-type: none"> <li>CodeB ADU</li> </ul>	<ul style="list-style-type: none"> <li>Vshop Res Env &amp; Solar</li> <li>CodeB ADU</li> </ul>	<ul style="list-style-type: none"> <li>CodeB ADU</li> <li>C&amp;C PV</li> <li>CodeB Solar</li> </ul>					<ul style="list-style-type: none"> <li>Res Modeling Tips</li> </ul>
2.4 Review information about a proposed project to determine key data about the building's envelope/PV and mechanical components.	<ul style="list-style-type: none"> <li>Res Stds EC</li> </ul>	<ul style="list-style-type: none"> <li>Res Modeling</li> </ul>	<ul style="list-style-type: none"> <li>Vshop Res Env &amp; Solar</li> </ul>	<ul style="list-style-type: none"> <li>CodeB ADU</li> </ul>	<ul style="list-style-type: none"> <li>Vshop Res Env &amp; Solar</li> <li>CodeB ADU</li> </ul>	<ul style="list-style-type: none"> <li>OLSS Res Solar</li> <li>CodeB Solar</li> <li>Vshop Res Env &amp; Solar</li> <li>CodeB ADU</li> </ul>	<ul style="list-style-type: none"> <li>OLSS Res HVAC</li> </ul>				<ul style="list-style-type: none"> <li>Final Project activity</li> </ul>
2.5 Analyze proposed project information to determine if all data is correct and internally consistent, and whether relevant information is missing or incomplete		<ul style="list-style-type: none"> <li>Tools</li> </ul>									<ul style="list-style-type: none"> <li>Final Project activity</li> </ul>

## Competency 3: Gather, Calculate and Organize All Information Needed for Energy Modeling

Review drawings, specifications and information provided by the designer or client; gather, calculate and record all pertinent data to input into the energy modeling software.

	1 EEC	2 Intro Modeling	3 Envelope Insulation	4 Envelop Opaque	5 Envelope Fenestratio n	5 Renewable s	6 HVAC	7 IAQ	8 DHW	9 Lighting	10 Intermedia te Modeling
3.1 Analyze a proposed project to determine pertinent data regarding HVAC systems and zones, including any HERS measures, to input into energy modeling software.		• Res Modeling					• OLSS Res HVAC • C&C Advanced HVAC & DHW		• C&C Advanced HVAC & DHW		• Res Exam Prep
3.2 Analyze a proposed project to identify pertinent data regarding water heating system(s) to input into energy modeling software.		• Res Modeling					• C&C Advanced HVAC & DHW				• Res Exam Prep
3.3 Organize and perform zone-by-zone area take-offs in accordance with the scope, type, and compliance approach for the project.		• Res Modeling	• C&C ADU Detached • C&C ADU Attached	• C&C ADU Detached • C&C ADU Attached	• C&C ADU Detached • C&C ADU Attached	• C&C PV • C&C ADU Detached • C&C ADU Attached					
3.4 Analyze take-offs for a proposed project to identify any relevant information that is missing or inconsistent.		• Tools	• C&C Take-off & Analysis	• C&C Take-off & Analysis	• C&C Take-off & Analysis		• C&C Take-off & Analysis	• C&C Take-off & Analysis	• C&C Take-off & Analysis		

## Competency 4: Model the Building with Approved Energy Compliance Software

Create an energy model of the building from all information gathered. Check to see if on-screen and report results are reasonable, and if not, correct the source of the error(s).

	1 EEC	2 Intro Modeling	3 Envelope Insulation	4 Envelop Opaque	5 Envelope Fenestratio n	5 Renewable s	6 HVAC	7 IAQ	8 DHW	9 Lighting	10 Intermedia te Modeling
4.1 Create an accurate energy model of a proposed project using state-approved energy modeling software.	<ul style="list-style-type: none"> <li>Res Exam Prep</li> </ul>	<ul style="list-style-type: none"> <li>Beg EnergyPro/C BECC-Res</li> <li>Res Modeling,</li> </ul>				<ul style="list-style-type: none"> <li>C&amp;C PV</li> </ul>	<ul style="list-style-type: none"> <li>OLSS Res HVAC</li> <li>Vshop Res Mechanical Systems</li> <li>C&amp;C Advanced HVAC &amp; DHW</li> </ul>		<ul style="list-style-type: none"> <li>OLSS Res Water Heating</li> <li>C&amp;C Advanced HVAC &amp; DHW</li> </ul>		<ul style="list-style-type: none"> <li>Intermedia te EnergyPro/C BECC-Res</li> </ul>
4.2 Explain how the Standard Design is established based on the modeled envelope, HVAC and water heating.	<ul style="list-style-type: none"> <li>Res Stds EC</li> </ul>	<ul style="list-style-type: none"> <li>Res Modeling</li> </ul>								<ul style="list-style-type: none"> <li>C&amp;C 2-Story</li> <li>C&amp;C E+A+A</li> </ul>	<ul style="list-style-type: none"> <li>Analyz ing the CF1R</li> </ul>
4.3 Evaluate the results of a building energy model to determine whether the results shown in reports and on-screen are reasonable.		<ul style="list-style-type: none"> <li>Res Modeling</li> </ul>	<ul style="list-style-type: none"> <li>C&amp;C 2-Story</li> <li>C&amp;C E+A+A</li> </ul>	<ul style="list-style-type: none"> <li>C&amp;C 2-Story</li> <li>C&amp;C E+A+A</li> </ul>		<ul style="list-style-type: none"> <li>C&amp;C 2-Story</li> </ul>	<ul style="list-style-type: none"> <li>C&amp;C 2-Story</li> <li>C&amp;C E+A+A</li> </ul>	<ul style="list-style-type: none"> <li>C&amp;C 2-Story</li> <li>C&amp;C E+A+A</li> </ul>	<ul style="list-style-type: none"> <li>C&amp;C 2-Story</li> <li>C&amp;C E+A+A</li> </ul>		<ul style="list-style-type: none"> <li>Analyz ing the CF1R</li> </ul>
4.4 Compare the CF-1R and other relevant compliance forms relative to known or listed project information (e.g., drawings, schedules and other data from client) to determine any modeling or data entry errors.		<ul style="list-style-type: none"> <li>Res Modeling</li> </ul>			<ul style="list-style-type: none"> <li>C&amp;C Res Modeling</li> </ul>					<ul style="list-style-type: none"> <li>C&amp;C Advanced HVAC &amp; DHW</li> </ul>	<ul style="list-style-type: none"> <li>Analyz ing the CF1R</li> </ul>
4.5 Summarize the mandatory envelope, mechanical, water heating, and lighting measures that apply to a proposed project.	<ul style="list-style-type: none"> <li>Res Stds EC</li> </ul>	<ul style="list-style-type: none"> <li>Tools</li> <li>C&amp;C Take-off &amp; Analysis</li> <li>C&amp;C New Construction</li> </ul>	<ul style="list-style-type: none"> <li>Vshop Res Env &amp; Solar</li> </ul>		<ul style="list-style-type: none"> <li>C&amp;C Shading</li> </ul>	<ul style="list-style-type: none"> <li>OLSS Res Solar</li> <li>Vshop Res Env &amp; Solar</li> </ul>	<ul style="list-style-type: none"> <li>C&amp;C Advanced HVAC &amp; DHW</li> </ul>		<ul style="list-style-type: none"> <li>C&amp;C Advanced HVAC &amp; DHW</li> </ul>	<ul style="list-style-type: none"> <li>Res lighting</li> </ul>	<ul style="list-style-type: none"> <li>Final Project activity</li> </ul>

## Competency 5: Consider Recommendations for Improving Energy Performance and Comfort

Use the knowledge of the project design and climate zone to make recommendations for improving energy performances to meet or exceed code.

	1 EEC	2 Intro Modeling	3 Envelope Insulation	4 Envelop Opaque	5 Envelope Fenestratio n	5 Renewable s	6 HVAC	7 IAQ	8 DHW	9 Lighting	10 Intermedia te Modeling
5.1 Evaluate the energy model for a proposed project to determine defensible recommendations for improving envelope design to meet or exceed code.	• Res Stds EC	• Res Modeling									• Analyzing the CF1R
5.2 Evaluate the energy model for a proposed project to determine defensible recommendations for improving HVAC and water heating systems to meet or exceed code.	• Res Stds EC	• Res Modeling					• C&C Advanced HVAC & DHW		• C&C Advanced HVAC & DHW		• Analyzing the CF1R
5.3 Identify HERS measures, when they apply, and the HERS registration and verification process; determine installation certificates and other documentation that must be completed after permit issuance.	• Res Stds EC	• Res Modeling	• Vshop Res Env & Solar	• Vshop Res Env & Solar	• Vshop Res Env & Solar	• OLSS Res Solar • Vshop Res Env & Solar	• OLSS Res HVAC • OLSS Res and NR HERS	• OLSS Res and NR HERS		• Res Lighting	• Res Modeling Tips
5.4 Describe the general characteristics and requirements of local Tier 1 energy codes, various utility incentives, tax credits and other energy programs; and energy-related calculation methods other than the Title 24 performance approach.						• CodeB Solar					