

Certification: Commercial Energy Inspector with ASHRAE 90.1



Exam ID: EA

- 50 multiple-choice questions
- 2-hour limit
- Open book

01	General Plan Review Issues	8%
0101	<u>Applicability</u> Determine if the building is required to comply with the provisions of the energy code.	4%
0106	<u>Additions, Alterations, and Change Of Use or Occupancy</u> When additions or alterations are made to conditioned space, verify whether the additions or alterations are required to comply with provisions of the code for new buildings. Determine if the occupancy or use of the structure has changed so as to require energy code compliance.	4%
02	Building Envelope	40%
0201	<u>General Envelope Requirements</u> Determine and identify conditioned, indirectly-conditioned, or unconditioned spaces.	6%
0202	<u>Opaque Envelope Compliance</u> Verify that the building envelope and its components, including doors, windows, and glazing, meet minimum requirements for installation of materials as specified on construction documents and as required by code.	12%
0203	<u>Windows, Skylights, and Doors</u> Verify areas and U-factors for installed glazing and doors. Verify solar heat gain coefficients (SHGC) and projection factors (PF) for glazing are as specified on construction documents and as required by code.	16%
0204	<u>Air Leakage</u> Verify that building envelope penetrations are caulked, sealed, and weather-stripped by materials and methods as specified on construction documents and where required by code.	4%
0205	<u>Moisture Control</u> Verify moisture control methods are provided as specified on construction documents and where required by code.	2%
03	Mechanical Systems	22%
0301	<u>Mechanical Summary</u> Verify installed equipment complies with the construction documents for type, size, and efficiencies. Verify operation manuals are provided with the equipment where required.	4%

0302	<u>Energy Recovery and Complex Systems</u>	2%
	Verify heat recovery equipment is installed as specified on construction documents.	
0303	<u>Economizers</u>	4%
	Verify installed economizer controls or equivalent efficiencies are as specified on construction documents and as required by code.	
0304	<u>Duct and Piping Systems</u>	6%
	Inspect HVAC equipment, ducts, and piping for required insulation and sealing as specified on construction documents and where required by code.	
0305	<u>Fan and Pump Systems</u>	2%
	Verify compliance for part load controls installed for required insulation and sealing as specified on construction documents and for fan or pump systems as specified on the construction documents and as required by code.	
0306	<u>HVAC Controls</u>	4%
	Verify installed HVAC controls and locations are as specified on construction documents and as required by code.	
04	Electrical Power and Lighting systems	26%
0401	<u>Exempt Lighting and Equipment</u>	2%
	Verify lighting installation is as specified on construction documents and as required by code.	
0402	<u>Lighting Power</u>	10%
	Verify lighting is installed as specified on construction documents and as required by code.	
0403	<u>Lighting Controls</u>	10%
	Verify compliance of lighting controls for building interiors and exteriors as specified on construction documents and as required by code.	
0404	<u>Wiring Methods and Metering</u>	4%
	Verify lighting installation is as specified on construction documents and as required by interiors and exteriors as specified on construction documents and as required by code. Verify metering is installed as required.	
05	Building Service Water Heating Systems and Equipment	4%
0501	<u>Water Heating Equipment</u>	4%
	Inspect piping insulation, circulation pump controls, heat traps, point of use controls, pool heaters, and covers are installed as specified on construction documents and as required by code.	