

COMMONWEALTH OF VIRGINIA

ALTERNATIVE ENERGY SYSTEM CONTRACTING EXAMINATION

Scope of Work: Alternative Energy System Contracting (Abbr: AESC) means that service which provides for the installation, repair or improvement, from the customer's meter, of alternative energy generation systems, supplemental energy systems and associated equipment annexed to real property. This service does not include the installation of emergency generators powered by fossil fuels. No other classification or specialty service provides this function. This specialty does not provide for electrical, plumbing, gas fitting, or HVAC functions.

# of Questions	Minimum Passing Score	Time Allowed
60	72% (43 correct)	150 Minutes

CONTENT OUTLINE

Subject Area	# of Items
Photovoltaics	23
Estimating, Calculations, and Designs	13
Electrical Theory and Knowledge	9
Wind Generated Power	10
Safety	5

EXAMINATION REFERENCE MATERIAL

The following is a list of possible reference materials for the examination. The list is given to identify resources and does not constitute an endorsement by PSI or by the Virginia Department of Professional and Occupational Regulation.

The reference material listed below was used to prepare the questions for this examination. The examination may also contain questions based on trade knowledge, or general industry practices. You can use any edition of references and Code books as they become available. However, for Code questions, the examination will be based only on the edition of the Code book that is listed.

NOTE: All examinations are open-book. You must bring your own references as they are not provided at the test site. No study guides are permitted.

No loose papers or unbound references are permitted. If you download a reference from the Internet, it must be spiral bound or hole-punched and placed in a binder or stapled in the left-hand corner.

References may be highlighted, underlined, and/or indexed prior to the exam. Reference materials containing any writing will not be allowed into the examination. You may not write in reference materials during the examination session. A candidate caught writing in the references during the examination will have the references confiscated and will be reported to the Department.

References may be tabbed with permanent tabs only. NO REMOVABLE TABS are allowed.

The following list of tabs may be used. These items may be purchased at local office supply stores.

Acceptable Tabs

Avery Swift Tabs Self-Adhesive Permanent Plastic Tabs
Redi-Tag Self-Stick Permanent Adhesive Index Tabs

Unacceptable Tabs

Post-It Index Flags
Post-It Flags

The URL listed for each reference is generated from the most current searches. However, placement of material on websites may be modified resulting in some discrepancies. If you are unable to find the reference under the URL listed, it is recommended that you search online via a search engine (e.g., Google).

- *Code of Federal Regulations - 29 CFR Part 1926 (OSHA)*, with latest available amendments, (866)-512-1800,
https://www.osha.gov/pls/oshaweb/owastand.disp_lay_standard_group?p_toc_level=1&p_part_number=1926
OR
Code of Federal Regulations - 29 CFR Part 1926 Selections by PSI, with latest available amendments, (866) 589-3088, <https://www.psonlinestore.com/29-cfr-part-1926-selections-2013/>
- *National Electrical Code*, NFPA 70, 2011, National Fire Protection Association,
<http://catalog.nfpa.org/NFPA-70-National-Electrical-Code-NEC-Handbook-2011-Edition-P17396.aspx>
- *Photovoltaic Systems*, Third edition, James Dunlap, American Technical Publishers, Orland Park, IL 60467-5756,
https://www.amazon.com/Photovoltaic-Systems-National-Apprenticeship-Training/dp/1935941054/ref=sr_1_1?s=books&ie=UTF8&qid=1497544888&sr=1-1&keywords=photovoltaic+systems+3rd+edition
- *Ugly's Electrical References*, George V. Hart, 2011;
https://www.amazon.com/s?k=ugly%27s+electrical+references%2C+2011+edition&i=stripbooks&crd=39S2WQMH5A1V3&srefix=%EF%82%A7%09Ugly%27s+Elec+References%2Cstripbooks%2C455&ref=nb_sb_ss_i_5_30
- *NRCA Guidelines for Roof Systems with Rooftop Photovoltaic Components*, 2018, The National Roofing Contractors Association, (866) 275-6722,
<https://standards.globalspec.com/std/1232269/nrc-a-3767>
- *Introduction to Wind Principles*, Thomas Kissell, 2011, Prentice Hall Publishers
<http://www.pearsonhighered.com>

