

2012 UNIFORM SOLAR ENERGY CODE[®]



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An American National Standard

IAPMO/ANSI USEC 1-2012

2012 Uniform Solar Energy Code®



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Code changes from the 2009 edition are marked in the margins as follows:

➔ An arrow in the margin indicates where an entire section, exception, paragraph, or table has been deleted or an item in a list of items or a table has been deleted.

| A solid vertical line in the margin indicates a technical change from the requirements of 2009 edition.

»» A double right angle in the margin indicates that text has been relocated within the code.

Information on referenced publications can be found in Chapter 12.

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2012 USEC Foreword

The advantages of a uniform solar energy code adopted by various jurisdictions have long been recognized by industry and government officials. The 2012 edition was developed through a true consensus process. Contributions to the content of the code were made from all sectors of the building environment, enforcing authority, installer/maintainer, labor, manufacturer, research/standard/testing laboratories, users and special experts.

The USEC is designed as a scientifically sound model code that supports renewable-energy sources through passive and active solar energy as potential alternatives to fossil fuels through performance standards, while, at the same time, allowing latitude for innovation and new technologies. Solar power generation has emerged as one of the most rapidly growing renewable sources for thermal energy, photovoltaic power and concentrating power. The public at large is encouraged and invited to participate in IAPMO's open consensus code development process. This code is updated every three years. A code development timeline and other relevant information are available at IAPMO's website at www.iapmo.org.

The *Uniform Solar Energy Code* is dedicated to all those who, in working to achieve "the ultimate solar code; have unselfishly devoted their time, effort, and personal funds to create and maintain this, the finest solar code in existence today.

The *2012 Uniform Solar Energy Code* is supported by the American Society of Sanitary Engineering (ASSE), the Mechanical Contractors Association (MCAA), the Plumbing-Heating-Cooling Contractors National Association (PHCC-NA), the United Association (UA), and the World Plumbing Council (WPC). The presence of these logos, while reflecting support, does not imply any ownership of the copyright to the USEC, which is held exclusively by IAPMO. Further, the logos of these associations indicate the support of IAPMO's open, consensus process being used to develop IAPMO's codes and standards.

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These lists represent the membership at the time the Committee was balloted on the final text of this edition. Since that time, changes in the membership may have occurred.

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CHAPTER 1 ADMINISTRATION

101.0 General.

101.1 Title. This document shall be known as the "Uniform Solar Energy Code," may be cited as such, and will be referred to herein as "this code."

- » **101.2 Scope.** The provisions of this code shall apply to the erection, installation, alteration, repair, relocation, replacement, addition to, use, or maintenance of solar energy systems, including but not limited to equipment and appliances intended to utilize solar energy for space heating or cooling; water heating; swimming pool heating or process heating; and solar photovoltaic systems.
- » **101.3 Purpose.** This code is an ordinance providing minimum requirements and standards for the protection of the public health, safety, and welfare.
- » **101.4 Unconstitutional.** Where a section, subsection, sentence, clause, or phrase of this code is, for a reason, held to be unconstitutional, such decision shall not affect the validity of the remaining portions of this code. The legislative body hereby declares that it would have passed this code, and each section, subsection, sentence, clause, or phrase thereof, irrespective of the fact that one or more sections, subsections, sentences, clauses, and phrases are declared unconstitutional.
- » **101.5 Validity.** Where a provision of this code, or the application thereof to a person or circumstance, is held invalid, the remainder of the code, or the application of such provision to other persons or circumstances, shall not be affected thereby.

» 102.0 Applicability.

- » **102.1 Conflicts Between Codes.** Where the requirements within the jurisdiction of this code conflict with the requirements of the plumbing or mechanical code, this code shall prevail. In instances where the code, applicable standards, or the manufacturer's installation instructions conflict, the more stringent provisions shall prevail. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall prevail.
- » **102.2 Existing Installation.** Solar energy systems lawfully in existence at the time of the adoption of this code shall be permitted to have their use, maintenance, or repair continued where the use, maintenance, or repair is in accordance with the original design and location and no hazard to life, health, or property has been created by such system.
- » **102.3 Maintenance.** Solar energy systems, materials, and appurtenances, both existing and new, and parts thereof shall be maintained in operating condition. Devices or safeguards required by this code shall be maintained in accordance with the code edition under which installed.

The owner or the owner's designated agent shall be responsible for maintenance of solar energy systems. To determine compliance with this subsection, the Authority

Having Jurisdiction shall be permitted to cause a solar energy system to be reinspected.

102.4 Additions, Alterations, or Repairs. Additions, alterations, renovations or repairs to a solar energy system shall conform to that required for a new system without requiring the existing solar energy system to be in accordance with the requirements of this code. Additions, alterations, renovations or repairs shall not cause an existing system to become unsafe, insanitary, or overloaded.

Additions, alterations, renovations or repairs to existing solar energy systems shall comply with the provisions for new construction, unless such deviations are found to be necessary and are first approved by the Authority Having Jurisdiction.

102.5 Health and Safety. Where compliance with the provisions of this code fails to eliminate or alleviate a nuisance, or other dangerous or insanitary condition that involves health or safety hazards, the owner or the owner's agent shall install such additional solar energy facilities or shall make such repairs or alterations as ordered by the Authority Having Jurisdiction.

102.6 Changes in Building Occupancy. Solar energy systems that are a part of a building or structure undergoing a change in use or occupancy, as defined in the building code, shall be in accordance with the requirements of this code that are applicable to the new use or occupancy.

102.7 Moved Structures. Parts of the solar energy systems of a building or part thereof that is moved from one foundation to another, or from one location to another, shall be completely tested as prescribed elsewhere in this section for new work, except that walls or floors need not be removed during such test where other equivalent means of inspection acceptable to the Authority Having Jurisdiction are provided.

102.8 Appendices. The provisions in the appendices are intended to supplement the requirements of this code and shall not be considered part of this code unless formally adopted as such.

103.0 Duties and Powers of the Authority Having Jurisdiction.

103.1 General. The Authority Having Jurisdiction shall be the Authority duly appointed to enforce this code. For such purposes, the Authority Having Jurisdiction shall have the powers of a law enforcement officer. The Authority Having Jurisdiction shall have the power to render interpretations of this code and to adopt and enforce rules and regulations supplemental to this code as deemed necessary in order to clarify the application of the provisions of this code. Such interpretations, rules, and regulations shall be in accordance with the intent and purpose of this code.

In accordance with the prescribed procedures and with the approval of the appointing authority, the Authority Hav-