

Notice

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An American National Standard
IAPMO/ANSI USEC 1-2009

2009 Uniform Solar Energy Code™



REVISION MARKINGS

Code changes from the 2006 edition are marked in the margins as follows:

→ An arrow denotes a deletion.

| A vertical denotes a change.

Information on referenced publications can be found in Chapter 11.

All pressures used in this code are gauge pressures unless otherwise indicated.

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FOREWORD

The advantages of a Uniform Solar Energy Code, acceptable in the various jurisdictions, have long been recognized. The increasing needs for such a code induced the International Association of Plumbing and Mechanical Officials to pass a resolution at its 46th Annual Business Conference, which directed the president to form a committee to develop a basic solar energy document.

After months of concerted endeavor, this committee, composed of representatives from industry and public utility companies, inspectors, plumbers, and engineers, successfully completed the first edition of the Uniform Solar Energy Code, which was officially adopted by the International Association of Plumbing and Mechanical Officials in September 1976.

In presenting the 2009 edition, IAPMO recognizes that the ultimate code has not yet been attained. Users of this code are respectfully urged to present whatever amendments their experience may dictate to IAPMO World Headquarters in accordance with the Regulations Governing Consensus Development of the Uniform Solar Energy and Swimming Pool, Spa & Hot Tub Codes. Amendments adopted by the committee are published every three years. This process serves to keep this basic document abreast of technological development.

The use of this document is intended to provide a safe and functional solar energy system with minimum regulations. Users of the Uniform Solar Energy Code are urged to strive for not just the minimum good solar energy system, but to keep the consumer in mind. With the exception of “high use and wear portions” of the system, the solar energy system should have the same life as other components of the building.

The Uniform Plumbing Code™ (UPC™) sections in this code are taken from the 2009 edition of the UPC.

The Uniform Mechanical Code™(UMC™) sections in this code are taken from the 2009 edition of the UMC.

The Uniform Solar Energy Code is dedicated to all those who have unselfishly devoted their time and effort to create and maintain it.

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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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- GI** *General Interest* – General Interest members are neither Producers nor Users. This category includes but is not limited to educators, researchers, representatives of regulatory agencies (including the enforcing authority), and technical societies.

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- (c) the proposed text of the proposal, including the wording to be added, revised (and how revised), or deleted;
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- (e) the signature of the submitter; and
- (f) two copies of any document(s) (other than an IAPMO document) being proposed as a reference standard or publication (see 10.1).

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CHAPTER 1

ADMINISTRATION

101.0 Title, Purpose, and Scope.

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 Purpose.

This code is an ordinance providing minimum requirements and standards for the protection of the public health, safety, and welfare. [UPC:101.2]

101.3 Plans Required.

The Authority Having Jurisdiction shall be permitted to require the submission of plans, specifications, drawings, and such other information as required by the Authority Having Jurisdiction, prior to the commencement of, and at any time during the progress of, any work regulated by this code.

The issuance of a permit upon plans and specifications shall not prevent the Authority Having Jurisdiction from thereafter requiring the correction of errors in said plans and specifications or from preventing construction operations being carried on thereunder when in violation of this code or of any other pertinent ordinance or from revoking any certificate of approval when issued in error. [UPC:101.3]

101.4 Scope.

101.4.1 The provisions of this code shall apply to the erection, installation, alteration, repair, relocation, replacement, addition to, use, or maintenance of solar systems within this jurisdiction. [UPC:101.4.1]

101.4.1.1 Repairs and Alterations. In existing buildings or premises in which solar installations are to be altered, repaired, or renovated, deviations from the provisions of this code are permitted, provided such deviations are found to be necessary and are first approved by the Authority Having Jurisdiction. [UPC:101.4.1.1.1]

101.4.1.2 Maintenance. The solar system of any premises under the Authority Having Jurisdiction shall be maintained in a sanitary and safe operating condition by the owner or the owner's agent. [UPC:101.4.1.2]

101.4.1.3 Existing Construction. No provision of this code shall be deemed to require a change in any portion of a solar system or any other work regulated by this code in or on an existing building or lot when such work was

installed and is maintained in accordance with law in effect prior to the effective date of this code, except when any such solar system or other work regulated by this code is determined by the Authority Having Jurisdiction to be in fact dangerous, unsafe, insanitary, or a nuisance and a menace to life, health, or property. [UPC:101.4.1.3]

101.4.1.4 Conflicts Between Codes. When the requirements within the jurisdiction of this code conflict with the requirements of the plumbing or mechanical code, this code shall prevail. [UPC:101.4.1.4]

101.4.2 Additions, Alterations, Repairs, and Replacement. Additions, alterations, repairs, and replacement of solar systems shall comply with the provisions for new systems except as otherwise provided in Section 101.5. [UPC:101.4.2]

101.4.3 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. [UPC:101.4.3]

101.5 Application to Existing Solar System.

101.5.1 Additions, Alterations, or Repairs. Additions, alterations, or repairs shall be permitted to be made to any solar system without requiring the existing solar system to comply with all the requirements of this code, provided the addition, alteration, or repair conforms to that required for a new solar system. Additions, alterations, or repairs shall not cause an existing system to become unsafe, insanitary, or overloaded. [UPC:101.5.1]

101.5.2 Health and Safety. Whenever compliance with the provisions of this code fails to eliminate or alleviate a nuisance, or any other dangerous or insanitary condition that may involve health or safety hazards, the owner or the owner's agent shall install such additional solar facilities or shall make such repairs or alterations as may be ordered by the Authority Having Jurisdiction. [UPC:101.5.2]

101.5.3 Existing Installation. Solar systems lawfully in existence at the time of the adoption of this code may have their use, maintenance, or repair continued if 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. [UPC:101.5.3]