

AN AMERICAN NATIONAL STANDARD  
IAPMO/ANSI USEC 1 – 2012

# 2012 UNIFORM SOLAR ENERGY CODE<sup>®</sup>



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TABLE OF CONTENTS



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An American National Standard  
IAPMO/ANSI USEC 1-2012

# 2012 Uniform Solar Energy Code®



## REVISION MARKINGS

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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The following table indicates such relocations in the 2012 Uniform Solar Energy Code.

<b>2009</b>	<b>2012</b>
101.2	101.3
101.3	103.3
101.4 — 101.4.1	101.2
101.4.1.1	102.4
101.4.1.4	102.1
101.4.3	102.8
101.5.1	102.4
101.5.2	102.5
101.5.3	102.2
101.5.4	102.6
101.5.5	102.3
102.1	103.1
102.2.2	103.4
102.2.3 — 102.2.5	106.4 — 106.6
102.2.6	103.2
102.3 — 102.3.1	106.0 — 106.1
102.3.2	106.3
103.1 — 103.2.2	104.0 — 104.3.1
103.2.3	104.3.3
103.3 — 103.3.1	104.4 — 104.4.1
103.3.2	104.4.6
103.3.3 — 103.3.5	104.4.2 — 104.4.5
103.4 — 103.4.1	104.5
103.4.2	104.3.2
103.4.3	104.3.4
103.4.4 — 103.4.5.3	104.5.1 — 104.5.3
103.5.1 — 103.5.1.1	105.1
103.5.1.2 — 103.5.1.4, 103.5.2	105.2 — 105.2.1
103.5.3 — 103.5.3.4	105.3
103.5.4 — 103.5.4.2	105.2.3 — 105.2.5
103.5.5	105.2.2
103.5.5.1	105.3.1
103.5.5.2	102.7
103.5.6	105.2.6
103.5.6.1	106.2
103.5.6.2 — 103.5.6.3	105.3.2 — 105.3.3
103.6	105.4
103.7	101.4
103.8	101.5
201.0	202.1
218.0	203.0
301.0	302.0 — 302.2.1.2
302.0	318.0
303.0	311.0 — 311.1
304.0	311.2
305.0	303.0
306.0	311.1
307.0	312.0
308.0	305.4

**continued**

<b>2009</b>	<b>2012</b>
309.0	304.0
310.0	305.0 — 305.2
311.0	407.2
312.0 — 312.1	402.0, 402.1.1
312.2 — 312.4	402.1.3 — 402.1.5
312.5	306.1
312.7	402.1.6
312.9	402.1.8
312.10	306.2
312.11	402.1.7
312.13 — 312.13.1	402.1.9 — 402.1.9.1
312.14 — 312.15	306.3 — 306.4
313.0, 313.5	307.0 — 307.1
313.1 — 313.3	307.3 — 307.5
313.4	307.2
313.6	307.6
314.0	308.0
315.0	305.3
316.0	309.0
317.0	313.0
318.0	319.0
319.0, 319.3	314.0 — 314.1
319.1	602.7
319.2	310.2
319.3	314.1
319.5	314.2
319.6	316.3
319.7.1 — 319.7.2.2	314.3.1 — 314.3.2
319.8	316.1
320.0	316.2
401.0	404.0
402.0	403.0 — 403.1
402.1	403.2.1
402.2	403.2, 403.3
402.4	403.2.3
403.0	405.0 — 405.2
404.1 — 404.7	405.3 — 405.9
404.8 — 404.9	405.11 — 405.12
405.0 — 405.4	406.0 — 406.4
405.6	405.10
405.7	406.5
406.0, 406.6.2	407.0, 407.3
406.1.1	Table 407.1, Note 2
406.2	Table 407.1, Note 3
406.3	Table 407.1, Note 4
406.6.2	407.3
406.7	407.4
407.0 — 407.1	408.0 — 408.1
407.2	408.6

**continued**

<b>2009</b>	<b>2012</b>
407.3	408.5
407.4	408.9
408.3	602.4
408.5	602.5
409.0	408.8
411.1 — 411.1.2	402.1.2
412.0	408.7
413.0	403.4
501.0	502.0
502.0	503.0
503.3 — 503.4	503.18 — 503.19
503.4	503.19
601.1.1	602.1
601.1.2	603.2
601.1.3	602.3
601.1.4	603.3
601.1.5	602.6
601.1.6	602.9
601.1.7	602.8
601.1.8	602.2
601.2	603.4
601.3.1 — 601.3.2	603.5 — 603.6
602.0	604.0
603.0	601.2
604.0	605.0
701.0 — 701.1	702.0 — 702.1
701.2, 705.0	703.0 — 703.1.1
701.3	703.1.2
701.4 – 701.6	702.2 – 702.4
701.7	703.3
701.8	702.5
702.1 — 702.2	703.6 — 703.7
703.1 — 703.2	702.6 — 702.6.1
705.2	703.2
705.3	703.4
804.3	802.4
901.0	317.0
1002.1 — 1002.2	1001.2 — 1001.3
1002.3 — 1002.3(D)	1002.0 — 1002.4
1002.4	1003.0
1002.5	1004.0
1002.6(A) — 1002.6(B)	1005.1 — 1005.2
1002.6(C) — 1002.6(E)	1005.3 — 1005.5
1002.7 — 1002.7(B)	1006.0 — 1006.2
1002.7(C) — 1002.7(D)	1006.6 — 1006.7
1002.8	1007.0
1002.9	1008.0
1002.10 — 1002.15	1009.0
1002.16 — 1002.16(E)	1010.0 — 1010.5

**continued**

<b>2009</b>	<b>2012</b>
1002.16(F)	1010.6
1002.17 — 1002.20(G)	1010.8 — 1010.11.7
1002.21	1011.1
1002.22	1011.2
1002.23	1011.3.1, 1011.3.2, 1011.3.3, 1011.3.5 — 1011.3.6
1002.24 — 1002.26(A)	1011.4 — 1011.6.1
1002.26(B)	1011.6.2
1002.26(C)	1011.6.3
1002.27 — 1002.29	1011.7 — 1011.9
1002.30 — 1002.35(B)	1012.2 — 1012.8
1002.36 — 1002.41(A)	1013.1 — 1013.5.1
1002.41(B)	1013.5.4 — 1013.5.4.7
1002.42	1014.1 — 1014.7
1002.43	1014.9
1002.44	1014.10
1002.45 — 1002.46	1015.1 — 1015.2
Chapter 11	Chapter 12
Appendix A	Useful Tables
Appendix B	Useful Tables
C1.0	A 1.0
C1.2 — C1.5	A 1.1 — A 1.4
C2.0 — C2.3	A 2.0 — A 2.3
C3.0 — C3.3	A 3.0 — A 3.3

## 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](http://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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- (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).

# TABLE OF CONTENTS

<b>CHAPTER 1</b>	<b>ADMINISTRATION . . . . .1</b>	<b>CHAPTER 2</b>	<b>DEFINITIONS . . . . .9</b>
101.0	General . . . . .1	201.0	General . . . . .9
101.1	Title . . . . .1	201.1	Applicability . . . . .9
101.2	Scope . . . . .1	202.0	Definition of Terms . . . . .9
101.3	Purpose . . . . .1	202.1	General . . . . .9
101.4	Unconstitutional . . . . .1	202.2	Terms Defined in Other Documents . . . . .9
101.5	Validity . . . . .1		
102.0	Applicability . . . . .1		
102.1	Conflicts Between Codes . . . . .1	<b>CHAPTER 3</b>	<b>GENERAL REGULATIONS . . . . .17</b>
102.2	Existing Installation . . . . .1	301.0	General . . . . .17
102.3	Maintenance . . . . .1	301.1	Applicability . . . . .17
102.4	Additions, Alterations, or Repairs . . . . .1	302.0	Materials – Standards and Alternates . . . . .17
102.5	Health and Safety . . . . .1		
102.6	Changes in Building Occupancy . . . . .1	302.1	Minimum Standards . . . . .17
102.7	Moved Structures . . . . .1	302.2	Alternate Materials and Methods of Construction Equivalency . . . . .17
102.8	Appendices . . . . .1		
103.0	Duties and Powers of the Authority Having Jurisdiction . . . . .1	302.3	Flood Hazard Areas . . . . .17
103.1	General . . . . .1	303.0	Structural Design Loads . . . . .18
103.2	Liability . . . . .2	303.1	General . . . . .18
103.3	Applications and Permits . . . . .2	304.0	Workmanship . . . . .18
103.4	Right of Entry . . . . .2	304.1	Engineering Practices . . . . .18
104.0	Permits . . . . .2	304.2	Concealing Imperfections . . . . .18
104.1	Permits Required . . . . .2	304.3	Burred Ends . . . . .18
104.2	Exempt Work . . . . .2	304.4	Installation Practices . . . . .18
104.3	Application for Permit . . . . .2	305.0	Installation . . . . .18
104.4	Permit Issuance . . . . .3	305.1	Dissimilar Metals . . . . .18
104.5	Fees . . . . .4	305.2	Direction of Flow . . . . .18
105.0	Inspections and Testing . . . . .4	305.3	Changes in Direction . . . . .18
105.1	General . . . . .4	305.4	Improper Location . . . . .18
105.2	Required Inspection . . . . .4	305.5	Attic Installations . . . . .18
105.3	Testing of Systems . . . . .5	306.0	Protection of Structures . . . . .18
105.4	Connection to Service Utilities . . . . .5	306.1	Structural Integrity . . . . .18
106.0	Violations and Penalties . . . . .5	306.2	Waterproofing of Openings . . . . .18
106.1	General . . . . .5	306.3	Rodentproofing . . . . .18
106.2	Notice of Correction or Violation . . . . .5	306.4	Protection Against Decay . . . . .18
106.3	Penalties . . . . .5	307.0	Hangers and Supports . . . . .19
106.4	Stop Orders . . . . .5	307.1	Components of Solar Energy System . . . . .19
106.5	Authority to Disconnect Utilities in Emergencies . . . . .6		
106.6	Authority to Condemn . . . . .6	307.2	Material . . . . .19
107.0	Board of Appeals . . . . .6	307.3	Suspended Piping . . . . .19
107.1	General . . . . .6	307.4	Alignment . . . . .19
107.2	Limitations of Authority . . . . .6	307.5	Underground Installation . . . . .19
Table 104.5	Solar Energy System Permit Fees . . . . .7	307.6	Hanger Rod Sizes . . . . .19

Table 307.6	Hanger Rod Sizes . . . . .	19
308.0	Trenching, Excavation, and Backfill . . . . .	19
308.1	Trenches . . . . .	19
308.2	Tunneling and Driving . . . . .	19
308.3	Open Trenches . . . . .	19
308.4	Excavations . . . . .	19
308.5	Water Pipes . . . . .	19
309.0	Testing . . . . .	19
309.1	Piping . . . . .	19
309.2	System Requirements . . . . .	19
Table 307.3	Hangers and Supports . . . . .	20
309.3	Storage Tanks . . . . .	20
310.0	Electrical . . . . .	20
310.1	Wiring . . . . .	20
310.2	Controls . . . . .	20
311.0	Disposal of Liquid Waste . . . . .	20
311.1	General . . . . .	20
311.2	Connections to Drainage System Required . . . . .	21
312.0	Location . . . . .	21
312.1	System . . . . .	21
312.2	Ownership . . . . .	21
313.0	Abandonment . . . . .	21
313.1	General . . . . .	21
313.2	Storage Tank . . . . .	21
314.0	Safety Requirements . . . . .	21
314.1	Welding . . . . .	21
314.2	Spark or Flame . . . . .	21
314.3	Hazardous Heat-Transfer Mediums . . . . .	21
314.4	Discharge . . . . .	21
315.0	Safety Devices . . . . .	21
315.1	Pressure Relief Valves . . . . .	21
315.2	Vacuum Relief Valves . . . . .	21
315.3	Space Heating . . . . .	21
316.0	Protection of System Components . . . . .	21
316.1	Materials . . . . .	21
316.2	Corrosion . . . . .	21
316.3	Mechanical Damage . . . . .	21
317.0	Duct Work . . . . .	22
317.1	General . . . . .	22
318.0	Iron Pipe Size (IPS) Pipe . . . . .	22
318.1	General . . . . .	22
319.0	Other Systems . . . . .	22
319.1	General . . . . .	22

**CHAPTER 4**

**PIPING AND**

**CROSS-CONNECTION**

**CONTROL . . . . .23**

401.0	General . . . . .	23
401.1	Applicability . . . . .	23
402.0	Protection of Piping, Materials, and Structures . . . . .	23
402.1	General . . . . .	23
403.0	Identification of Piping Systems . . . . .	24
403.1	General . . . . .	24
403.2	Color and Information . . . . .	24
Table 403.2.1	Minimum Length of Color Field and Size of Letters . . . . .	24
403.3	Location of Piping Identification . . . . .	24
403.4	Flow Directions . . . . .	24
404.0	Unlawful Connections . . . . .	24
404.1	Prohibited Installation . . . . .	24
404.2	Cross-Contamination . . . . .	24
404.3	Backflow Prevention . . . . .	24
405.0	Cross-Connection Control . . . . .	24
405.1	General . . . . .	24
405.2	Approval of Devices or Assemblies . . . . .	24
405.3	Assemblies . . . . .	25
405.4	Backflow Prevention Valve . . . . .	25
405.5	Testing . . . . .	25
405.6	Access and Clearance . . . . .	25
405.7	Connections . . . . .	25
405.8	Hot Water Backflow Preventers . . . . .	25
405.9	Integral Backflow Preventers . . . . .	25
405.10	Prohibited Locations . . . . .	25
405.11	Cold Climate . . . . .	25
405.12	Drain Lines . . . . .	25
406.0	Specific Requirements . . . . .	25
406.1	Heat Exchangers . . . . .	25
406.2	Water Supply Inlets . . . . .	25
Table 405.2(1)	Backflow Prevention Devices, Assemblies and Methods . . . . .	26
Table 405.2(2)	Minimum Air Gaps . . . . .	27
406.3	Systems with Backflow Devices . . . . .	27
406.4	Chemical Injection . . . . .	27
406.5	Deck-Mounted and Equipment- Mounted Vacuum Breakers . . . . .	27
407.0	Materials . . . . .	27
407.1	Piping Materials . . . . .	27
407.2	Screwed Fittings . . . . .	27

407.3	Storage Tank Connectors . . . . .	27	503.18	Expansion Joints . . . . .	33
407.4	Flexible Connectors . . . . .	27	503.19	Unions . . . . .	33
408.0	Valves . . . . .	27			
408.1	General . . . . .	27	<b>CHAPTER 6</b>	<b>THERMAL STORAGE . . . . .</b>	<b>35</b>
408.2	Fullway Valves . . . . .	27	601.0	General . . . . .	35
408.3	Shutoff Valves . . . . .	27	601.1	Applicability . . . . .	35
408.4	Balancing Valves . . . . .	28	601.2	Test Pressure for Storage Tanks . . .	35
408.5	Accessible . . . . .	28	602.0	Storage Tanks . . . . .	35
408.6	Control Valves . . . . .	28	602.1	Plans . . . . .	35
Table 407.1	Materials for Piping and Fittings . . .	28	602.2	Gravity Tanks . . . . .	35
408.7	Check Valves . . . . .	28	602.3	Prefabricated Tanks . . . . .	35
408.8	Automatic Air Vents . . . . .	28	602.4	Pressure-Type Storage Tanks . . . .	35
408.9	Closed Loop Systems . . . . .	28	602.5	Separate Storage Tanks . . . . .	35
			602.6	Underground Tanks . . . . .	35
<b>CHAPTER 5</b>	<b>JOINTS AND</b>		602.7	Pressure Vessels . . . . .	35
	<b>CONNECTIONS . . . . .</b>	<b>29</b>	602.8	Devices . . . . .	35
501.0	General . . . . .	29	602.9	Tank Covers . . . . .	35
501.1	Applicability . . . . .	29	602.10	Watertight Pan . . . . .	35
502.0	Tightness . . . . .	29	603.0	Materials . . . . .	35
502.1	General . . . . .	29	603.1	General . . . . .	35
503.0	Types of Joints . . . . .	29	603.2	Construction . . . . .	35
503.1	Asbestos-Cement Pipe		603.3	Standards . . . . .	35
	and Joints . . . . .	29	603.4	Concrete . . . . .	35
503.2	Brass Pipe and Joints . . . . .	29	603.5	Metal Tanks . . . . .	36
503.3	Copper Pipe, Tubing		603.6	Filler Metal . . . . .	36
	and Joints . . . . .	29	603.7	Non-Fiberglass Storage Tanks . . . .	36
503.4	CPVC Plastic Pipe and Joints . . . .	30	603.8	Fiber-Reinforced Storage Tanks . . .	36
503.5	Ductile Iron Pipe and Joints . . . . .	30	604.0	Expansion Tanks . . . . .	36
503.6	Galvanized Steel Pipe		604.1	Where Required . . . . .	36
	and Joints . . . . .	31	604.2	Systems with Open	
503.7	PE Plastic Pipe/Tubing			Type Expansion Tanks . . . . .	36
	and Joints . . . . .	31	604.3	Closed-Type Systems . . . . .	36
503.8	PE-AL-PE Plastic		604.4	Minimum Capacity	
	Pipe/Tubing and Joints . . . . .	31		of Closed-Type Tank . . . . .	36
503.9	PE-RT . . . . .	31	Table 604.4(1)	Expansion Tank Capacities	
503.10	PEX Plastic Tubing and Joints . . . .	31		for Gravity Hot Water Systems . . . .	36
503.11	PEX-AL-PEX Plastic		Table 604.4(2)	Expansion Tank Capacities	
	Tubing and Joints . . . . .	32		for Forced Hot Water Systems . . . .	36
503.12	Polypropylene (PP)		605.0	Dry Storage Systems . . . . .	37
	Piping and Joints . . . . .	32	605.1	Waterproofing . . . . .	37
503.13	PVC Plastic Pipe and Joints . . . . .	32	605.2	Detecting Water Intrusion . . . . .	37
503.14	Stainless Steel Pipe and Joints . . . .	32	605.3	Rock as Storage Material . . . . .	37
503.15	Slip Joints . . . . .	32	605.4	Odor and Particulate Control . . . . .	37
503.16	Dielectric Unions . . . . .	32	605.5	Combustibles Within Ducts	
503.17	Joints Between			or Plenums . . . . .	37
	Various Materials . . . . .	32			

<b>CHAPTER 7</b>	<b>COLLECTORS</b>	<b>39</b>
701.0	General	39
701.1	Applicability	39
702.0	Construction	39
702.1	General	39
702.2	Construction	39
702.3	Glass	39
702.4	Plastic	39
702.5	Listing	39
702.6	Air Collectors	39
703.0	Collector Installation	39
703.1	General	39
703.2	Access	39
703.3	Stagnation Condition	39
703.4	Waterproofing	39
703.5	Fasteners	39
703.6	Combustible Materials	39
703.7	Orientation	39
703.8	Wall Mounted	39
704.0	Fire Safety Requirements	39
704.1	Building Components	39
704.2	Above or On the Roof	39
<b>CHAPTER 8</b>	<b>THERMAL INSULATION</b>	<b>41</b>
801.0	General	41
801.1	Applicability	41
802.0	Piping	41
802.1	Required	41
802.2	Fittings	41
802.3	Installation	41
802.4	Insulation	41
803.0	Ducts	41
803.1	General	41
804.0	Tanks	41
804.1	Thickness	41
Table 804.1	Minimum Tank Insulation	41
804.2	Temperature Difference	41
Table 802.1(1)	Minimum Pipe Insulation	41
Table 802.1(2)	Iron Pipe and Copper Tubing Insulation Thickness	42
Table 802.1(3)	Universal Pipe Insulation Thickness Based on Radius and IPS	43
Table 802.1(4)	Design Values for Thermal Conductivity ( <i>k</i> ) of Industrial Insulation	44
Table 803.1	Insulation of Ducts	45

<b>CHAPTER 9</b>	<b>SOLAR THERMAL SYSTEMS FOR A SWIMMING POOL</b>	<b>47</b>
901.0	General	47
901.1	Applicability	47
902.0	Water Chemistry	47
902.1	General	47
902.2	Parameters	47
Table 902.2	Water Chemistry	47
902.3	Filter	47
903.0	Corrosion Resistant	47
903.1	Copper	47
<b>CHAPTER 10</b>	<b>ELECTRICAL</b>	<b>49</b>
1001.0	General	49
1001.1	Electrical Wiring and Equipment	49
1001.2	Applicability	49
1001.3	Other Articles	49
1001.4	Output Characteristics	49
1001.5	Interrupting and Short-Circuit Current Rating	49
1001.6	Ground-Fault Protection	50
1001.7	Synchronous Generators	50
1002.0	Installation	50
1002.1	Photovoltaic Systems	50
1002.2	Identification and Grouping	50
1002.3	Module Connection Arrangement	50
1002.4	Equipment	50
1002.5	Wiring and Connection	50
1002.6	Circuit Routing	50
1002.7	Bipolar PV Systems	50
1002.8	Multiple Inverters	50
1002.9	Photovoltaic Modules/Panels/Shingles	50
1003.0	Ground-Fault Protection	51
1003.1	General	51
1003.2	Ground-Fault Detection and Interruption	51
1003.3	Isolating Faulted Circuits	51
1003.4	Labels and Markings	51
1004.0	Alternating-Current (ac) Modules	51
1004.1	Photovoltaic Source Circuits	51
1004.2	Inverter Output Circuit	51
1004.3	Disconnecting Means	51
1004.4	Ground-Fault Detection	51
1004.5	Overcurrent Protection	51

1005.0	Circuit Requirements . . . . .	51	1008.7	Arc-Fault Circuit Protection (Direct Current) . . . . .	55
1005.1	Maximum Photovoltaic System Voltage . . . . .	51	1009.0	Disconnecting Means . . . . .	55
Table 1005.1	Voltage Correction Factors for Crystalline and Multicrystalline Silicon Modules . . . . .	52	1009.1	Conductors . . . . .	55
1005.2	Direct-Current Utilization Circuits . . . . .	52	1009.2	Photovoltaic Disconnecting . . . . .	56
1005.3	Photovoltaic Source and Output Circuits . . . . .	53	1009.3	Disconnecting and Servicing of Fuses . . . . .	56
1005.4	Circuits Over 150 Volts to Ground . . . . .	53	1009.4	Switch or Circuit Breaker . . . . .	57
1005.5	Bipolar Source and Output Circuits . . . . .	53	1009.5	Installation and Service of an Array . . . . .	57
1005.6	Live Parts Guarded Against Accidental Contact . . . . .	53	1010.0	Wiring Methods Permitted . . . . .	57
1005.7	Prevent Physical Damage . . . . .	53	1010.1	General . . . . .	57
1005.8	Warning Signs . . . . .	53	1010.2	Single-Conductor Cable . . . . .	57
1006.0	Circuit Sizing and Current . . . . .	53	1010.3	Flexible Cords and Cables . . . . .	57
1006.1	Calculation of Maximum Circuit Current . . . . .	53	Table 1010.3	Correction Factors Based on Temperature Rating of Conductor . . . . .	57
1006.2	Ampacity and Overcurrent Device Ratings . . . . .	53	1010.4	Small-Conductor Cables . . . . .	57
1006.3	Overcurrent Devices Rated 800 Amperes or Less . . . . .	54	1010.5	Direct-Current Photovoltaic Source and Output Circuits Inside a Building . . . . .	57
1006.4	Overcurrent Devices Exceeding 800 Amperes . . . . .	54	1010.6	Flexible, Fine-Stranded Cables . . . . .	58
1006.5	Small Conductors . . . . .	54	1010.7	Terminals . . . . .	58
1006.6	Systems with Multiple Direct-Current Voltages . . . . .	54	1010.8	Component Interconnections . . . . .	58
1006.7	Sizing of Module Interconnection Conductors . . . . .	54	1010.9	Connectors . . . . .	58
1007.0	Overcurrent Protection . . . . .	54	1010.10	Access to Boxes . . . . .	58
1007.1	Circuits and Equipment . . . . .	54	1010.11	Ungrounded Photovoltaic Power Systems . . . . .	58
1007.2	Power Transformers . . . . .	54	1011.0	Grounding . . . . .	59
1007.3	Photovoltaic Source Circuits . . . . .	55	1011.1	System Grounding . . . . .	59
1007.4	Direct-Current Rating . . . . .	55	1011.2	Point of System Grounding Connection . . . . .	59
1007.5	Series Overcurrent Protection . . . . .	55	1011.3	Equipment Grounding . . . . .	59
1008.0	Stand-Alone Systems . . . . .	55	1011.4	Size of Equipment Grounding Conductor . . . . .	61
1008.1	General . . . . .	55	1011.5	Array Equipment Grounding Conductors . . . . .	61
1008.2	Inverter Output . . . . .	55	1011.6	Grounding Electrode System . . . . .	61
1008.3	Sizing and Protection . . . . .	55	Table 1011.4.1	Minimum Size Equipment Grounding Conductors for Grounding Raceway and Equipment . . . . .	62
1008.4	Single 120-Volt Supply . . . . .	55	1011.7	Continuity of Equipment Grounding Systems . . . . .	64
1008.5	Energy Storage or Backup Power System Requirements . . . . .	55	1011.8	Continuity of Photovoltaic Source and Output Circuit Grounded Conductors . . . . .	65
1008.6	Back-Fed Circuit Breakers . . . . .	55	1011.9	Equipment Bonding Jumpers . . . . .	65

1012.0	Marking	.65
1012.1	Directory	.65
1012.2	Modules	.65
1012.3	Alternating-Current Photovoltaic Modules	.65
1012.4	Direct-Current Photovoltaic Power Source	.65
1012.5	Interactive System Point of Interconnection	.65
1012.6	Photovoltaic Power Systems Employing Energy Storage	.65
1012.7	Facilities with Stand-Alone Systems	.65
1012.8	Facilities with Utility Services and PV Systems	.65
1013.0	Connection to Other Sources	.65
1013.1	Load Disconnect	.65
1013.2	Identified Interactive Equipment	.65
1013.3	Loss of Interactive System Power	.65
1013.4	Unbalanced Interconnections	.65
1013.5	Point of Connection	.66
1014.0	Storage Batteries	.67
1014.1	Installation	.67
1014.2	Dwellings	.67
1014.3	Current Limiting	.67
1014.4	Battery Nonconductive Cases and Conductive Racks	.67
1014.5	Disconnection of Series Battery Circuits	.67
1014.6	Battery Maintenance Disconnecting Means	.67
1014.7	Battery Systems Exceeding 48 Volts	.67
1014.8	Battery Locations	.67
1014.9	Charge Control	.67
1014.10	Battery Interconnections	.68
1015.0	Systems Over 600 Volts	.68
1015.1	General	.68
1015.2	Definitions	.68
1015.3	Guarding of High-Voltage Energized Parts Within a Compartment	.68
1015.4	High-Voltage Equipment	.68
1015.5	Circuit Breakers	.68
1015.6	Operating Characteristics	.68

1015.7	Nameplate	.69
1015.8	High-Voltage Fuses	.69
1015.9	Voltage Rating	.69

<b>CHAPTER 11</b>	<b>PUMPS</b>	<b>.71</b>
1101.0	General	.71
1101.1	Applicability	.71
1102.0	Installation	.71
1102.1	General	.71
1102.2	Maintenance	.71
1102.3	Mounting	.71
1103.0	Design and Operation	.71
1103.1	Flow Rate	.71
1103.2	Materials	.71
1103.3	Operation	.71

<b>CHAPTER 12</b>	<b>REFERENCED STANDARDS</b>	<b>.73</b>
1201.0	General	.73
1201.1	Standards	.73
Table 1201.1	Referenced Standards	.73

<b>APPENDICES TABLE OF CONTENTS</b>	<b>.83</b>	
Appendix A	Engineered Solar Energy Systems	.85
Appendix B	Solar Photovoltaic System Installation Guidelines	.87
Appendix C	Supplemental Checklist for Solar Photovoltaic Systems	.93

<b>USEFUL TABLES</b>	<b>.95</b>
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<b>INDEX</b>	<b>.99</b>
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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-