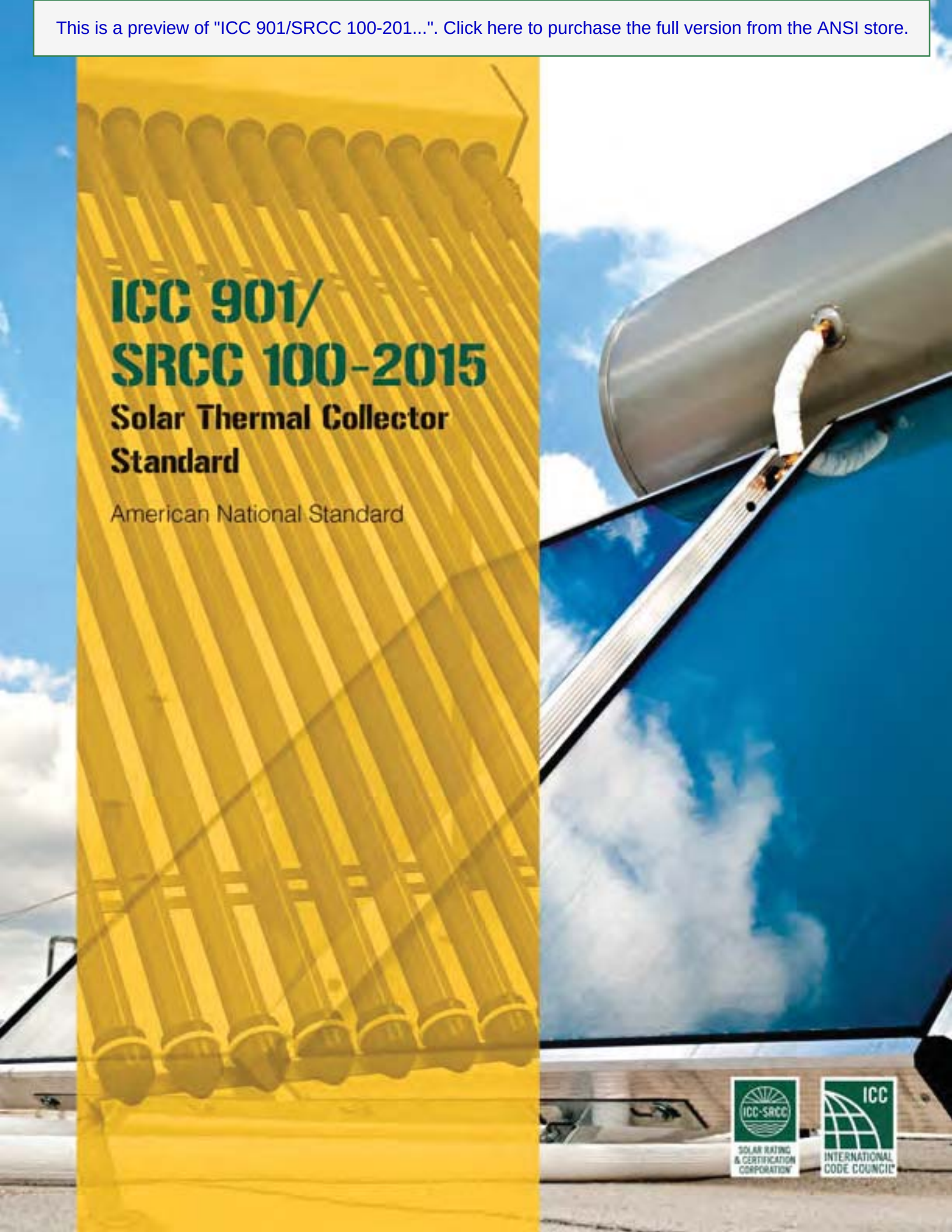
ICC 901/ SRCC 100-2015

Solar Thermal Collector Standard

American National Standard



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American National Standard

International Code Council
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Washington, D.C. 20001

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American National Standards Institute
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American National Standard

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Consensus is established when, in the judgement of the ANSI Board of Standards Review, substantial agreement has been reached by directly and materially affected interests. Substantial agreement means much more than a simple majority, but not necessarily unanimity. Consensus requires that all views and objections be considered, and that a concerted effort be made toward their resolution.

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FOREWORD

Introduction

The first version of SRCC Standard 100 was developed in 1981 by the Solar Rating and Certification Corporation (SRCC) as a result of efforts by a consortium including the U.S. Department of Energy, National Renewable Energy Laboratory (NREL), Interstate Renewable Energy Council (IREC), Florida Solar Energy Center (FSEC) and the Solar Energy Industry Association (SEIA). Since that time, the standard has been updated periodically by means of SRCC's standard development process. The consensus process used by SRCC was consistent with ANSI requirements for the development of voluntary consensus standards including balance of stakeholders, transparency and due process.

In 2013, SRCC and ICC agreed to collaborate to develop an updated version of the SRCC 100—2013 *Minimum Standards for Solar Thermal Collectors* and SRCC 600-2013 *Minimum Standard for Solar Thermal Concentrating Collectors* standards through ICC's ANSI-approved Standard Development process to seek designation as an American National Standard (ANS). With direction from ICC's Board of Directors and the SRCC Board of Directors, the ICC Standards Council appointed a consensus committee to develop a single updated standard to establish minimum requirements for safety, performance and testing of solar thermal collectors.

Development

This is the first edition of the International Code Council® (ICC®) 901/Solar Rating and Certification Corporation® (SRCC®) 100 *Solar Thermal Collector Standard*, but it is based substantially on the SRCC Standard 100—2013, SRCC 600-2013, and SRCC TM-1 *Solar Thermal Component Test and Analysis Protocol*. By incorporating the provisions for concentrating collectors from Standard 600, and the provisions for integrated collector storage (ICS) types from TM-1, this new version of Standard 100 addresses the widest possible range of collector types in a single document. This standard was developed by the ICC/SRCC Solar Thermal Standard Consensus Committee (IS-STSC) that operates under ANSI-approved ICC Consensus Procedures for the development of ICC standards.

The meetings of the IS-STSC Consensus Committee were open to the public and interested individuals and organizations from across the country participated. Views and objections were solicited through several public comment periods. All views and objections were considered by the consensus committee and an effort was made toward their resolution. A vote by the consensus committee approved this standard.

The requirements in ICC 901/SRCC 100—2015 are based on the intent to both update the long-established SRCC 100 standard and improve consistency with the latest model plumbing and mechanical codes in use. A task group specifically reviewed the provisions within the standard to eliminate any conflicts with codes and establish common terms and rigor. The resulting document provides appropriate protections for health, safety and welfare while avoiding unnecessary restrictions on the use of new materials, technologies or designs.

Adoption

ICC 901/SRCC 100, *Solar Thermal Collector Standard* is available for reference and use by jurisdictions in both codes and incentive programs internationally. It represents an update to SRCC Standard 100 and SRCC Standard 600 and is appropriate for use as a successor to those documents. Its use within a governmental jurisdiction is intended to be accomplished through adoption by reference in accordance with proceedings establishing the jurisdiction's law.

Interpretations

Requests for interpretations on the provisions of ICC 901/SRCC 100—2015 should be addressed to: ICC, Central Regional Office, 4051 Flossmoor Road, Country Club Hills, IL 60478.

Maintenance—Submittal of Proposals

All ICC standards are revised as required by ANSI. Proposals for revising this edition are welcome. Please visit the ICC website at www.iccsafe.org for the official "Call for Proposals" announcement. A proposal form and instructions can also be downloaded from www.iccsafe.org.

ICC, SRCC, its members and those participating in the development of ICC 901/SRCC 100—2015 do not accept any liability resulting from compliance or noncompliance with the provisions of ICC 901/SRCC 100—2015. Neither ICC nor SRCC have the power or authority to police or enforce compliance with the contents of this standard. Only the governmental body that enacts this standard into law has such authority.

International Code Council Solar Thermal Standard Consensus Committee (IS-STSC)

Consensus Committee SCOPE: The Solar Thermal Standard Consensus Committee (IS-STSC) shall have primary responsibility for minimum requirements to safeguard the public health, safety and general welfare along with minimum performance, and evaluation requirements for solar thermal systems. The requirements contained in the *International Codes* pertaining to these situations shall be coordinated with the standards developed by the IS-STSC Consensus Committee.

This standard was processed and approved for submittal to ANSI by the ICC Solar Thermal Standard Consensus Committee (IS-STSC). Committee approval of the standard does not necessarily imply that all committee members voted for its approval.

Representatives on the Consensus Committee are classified in one of three voting interest categories, General Interest (G), User Interest (U) and Producer Interest (P). The committee has been formed in order to achieve consensus as required by ANSI Essential Requirements. At the time it approved this standard, the IS-STSC Consensus Committee consisted of the following members:

Rolf Christ (P), R&R Solar Supply, Honolulu, Hawaii

Thomas Cleveland (U), North Carolina Clean Energy Technology Center at NC State University, Raleigh, North Carolina

John Del Mar, PE, MS (U), Florida Solar Energy Center (FSEC), Cocoa, Florida

William Funk, Jr. (G), Cecil County Permits and Inspections, Elkton, Maryland

Rex Gillespie (P), Caleffi North America, Inc., Milwaukee, Wisconsin

McKenzie W. James (G), City of Portland, Portland, Oregon

Robert J. Klein, CBO (G), Town of Hilton Head Island, Hilton Head Island, South Carolina

Nathan Lohse (P), FAFCO, Inc., Chico, California

Bill Miao (P), SunEnergyNet, San Diego, California

Larry Sherwood (U), Sherwood Associates, Boulder, Colorado

John Smirnow (P), Solar Energy Industries Association (SEIA), Washington, District of Columbia

Shawn Strausbaugh (G), Arlington County, Arlington, Virginia

Secretaries: **Shawn Martin,** Director of PMG Activities, Plumbing, Mechanical and Fuel Gas Group, International Code Council, Pittsburgh, Pennsylvania; **Jim Huggins,** Technical Director, Solar Rating and Certification Corporation, Cocoa, Florida.

Voting Membership in Each Category

Category	Number
General (G)	4
User (U)	3
Producer (P)	5
TOTAL	12

Interest Categories

General Interest: Individuals assigned to the General Interest category are those who represent the interests of an entity, including an association of such entities, representing the general public, or entities that promulgate or enforce the provisions within the committee scope. These entities include consumers and government regulatory agencies.

User Interest: Individuals assigned to the User Interest category are those who represent the interests of an entity, including an association of such entities, which is subject to the provisions or voluntarily utilizes provisions within the committee scope.

These entities include academia, applied research laboratory, building owner, design professional, government nonregulatory agency, insurance company, private inspection agency and product certification/evaluation agency.

Producer Interest: Individuals assigned to the Producer Interest category are those who represent the interests of an entity, including an association of such entities, which produces, installs or maintains a product, assembly or system subject to the pro-

visions within the committee scope. These entities include builder, contractor, distributor, laborer, manufacturer, material association, standards promulgator, testing laboratory and utility.

NOTE—Multiple Interests: Individuals representing entities in more than one of the above interest categories, one of which is a Producer Interest, are assigned to the Producer Interest. Individuals representing entities in the General Interest and User Interest categories are assigned to the User Interest.

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101.1 Purpose. This standard sets forth minimum durability, construction, performance criteria and procedures for characterizing the thermal performance and indicating the durability of solar collectors used in applications such as swimming pool heating, space heating, cooling and water heating.

SECTION 102
SCOPE

102.1 Scope. This standard applies to solar thermal collectors using a fluid for the heat transfer. The standard sets forth minimum requirements for durability, construction and performance testing and provides the methodology and means for evaluating the durability and performance of tested solar thermal collectors.

SECTION 103
REFERENCED DOCUMENTS

103.1 Referenced documents. The codes and standards referenced in this standard shall be considered to be part of the requirements of this standard to the prescribed extent of each such reference. Chapter 5 contains a complete list of all referenced standards.