IREC-ISPQ

INTERNATIONAL STANDARD

01022:2011

General Requirements for Trainers and
Training Programs Offering

**Renewable Energy, Energy Efficiency,
or Distributed Generation Training**

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I.   Introduction

The Institute for Sustainable Power, Inc. (ISP) is an international, non-profit organization, incorporated in 1996, to coordinate, develop, and maintain international standards for the evaluation and qualification of renewable energy (RE), energy efficiency (EE), and distributed generation (DG) training providers. ISP and other approved program providers evaluate and qualify instructors, master trainers, training programs, and continuing education providers through a process known as accreditation (in the case of organizations) or certification (in the case of individuals). In 2011 the Interstate Renewable Energy Council purchased the International Standard 01022 from the Institute for Sustainable Power, Inc.

Organizations accredited by IREC ISPQ, and individuals certified by IREC ISPQ, attest that they have the skills and resources to deliver high-quality training covering the skills and competency requirements of specific RE/EE/DG trades.

ISP developed six (6) accreditation and certification recognitions, as follows:

- **Training Program Accreditation (Accredited Training Program):** Recognition for a legally registered institution or organization providing a course or series of courses covering **all** of the points of an IREC ISPQ-accepted Job Task Analysis and is of sufficient length to provide learners with sufficient exposure to all critical tasks identified in the Job Task Analysis.

- **Continuing Education Provider Accreditation (Accredited Continuing Education Provider):** Recognition for a provider of short courses or workshops relevant to renewable energy, energy efficiency, or distributed generation fields that complement or supplement the knowledge of the learner.

- **Affiliated Master Trainer Certification (Certified Affiliated Master Trainer):** Recognition for instructors with considerable experience and education who are: qualified both to teach conventional students, as well as fellow instructors, within the renewable energy, energy efficiency, and distributed generation fields; and, employed by an Accredited Training Program, Accredited Continuing Education Provider, or Certified Independent Master Trainer.

- **Independent Master Trainer Certification (Certified Independent Master Trainer):** Recognition for Affiliated Master Trainers as described above, only Independent Master Trainers are qualified to deliver these trainings independent of a fixed facility or program, taking personal responsibility for the quality of the facility, the resources the facility provides, and the policies and procedures which govern the relevant RE, EE, and/or DG training.

- **Affiliated Instructor Certification (Certified Affiliated Instructor):** Recognition for professionals who teach renewable energy, energy efficiency, or distributed generation courses in the employ of an IREC ISPQ Accredited Training Program, IREC ISPQ Accredited Continuing Education Provider, or an IREC ISPQ Certified Independent Master Trainer.

- **Independent Instructor Certification (Certified Independent Instructor):** Recognition for Affiliated Instructors as described above, only Independent Instructors are qualified to deliver these trainings independent of a fixed facility or program, taking personal responsibility for the quality of the facility, the resources the facility provides, and the policies and procedure which govern the relevant RE, EE, and/or DG training.

II. Scope

This International Standard identifies requirements for competency, quality systems, resources, and qualification of a curriculum by which trainers and training programs can be evaluated. The scope of IREC ISPQ recognition is limited to the renewable energy, energy efficiency, and distributed generation fields. ISP-recognized programs, institutions, and individuals must teach topics from an IREC ISPQ-accepted Job Task Analysis or relevant to the fields of renewable energy, energy efficiency, and/or distributed generation.

NOTE: The curriculum evaluation is based on the curriculum meeting the knowledge and skills competencies defined in an IREC ISPQ-accepted Job Task Analysis.

NOTE: It is possible that some elements of this International Standard may be the subject of patent rights. IREC shall not be held responsible for identifying any or all such patent rights.

III. Structure of the Standard

This document represents the Standard by which training programs, trainers, and continuing education providers can be accredited or certified by ISP. This Standard: describes the required experiences, structure, and resources that training programs, training providers, or continuing education providers must possess in order to be awarded IREC ISPQ accreditation or certification; and, specifies the requirements which ensure that training bodies operate in a consistent, comparable, and reliable manner.

This Standard is organized into the following six (6) sections:
- **Core Standards:** The Core standards apply to candidates and recipients for all six (6) of the current IREC ISPQ recognitions.

- **Tier 1 Standards:** Tier 1 standards apply to candidates and recipients for the following IREC ISPQ recognitions: Accredited Training Program; Accredited Continuing Education Provider; Certified Independent Master Trainer; and Certified Independent Instructor.

- **Tier 2 Standards:** Tier 2 standards apply to candidates and recipients for the following IREC ISPQ recognitions: Accredited Training Program; Certified Independent Master Trainer; and Certified Independent Instructors.

- **Tier 3 Standards:** Tier 3 standards apply to candidates and recipients for the IREC ISPQ Accredited Training Program recognition.

- **Tier 4 Standards:** Tier 4 standards apply to candidates and recipients for the following IREC ISPQ   recognitions: Certified Affiliated Master Trainer; Certified Independent Master Trainer; Certified Independent Instructor; and Certified Affiliated Instructor.

- **Tier 5 Standards:** Tier 5 standards apply to candidates and recipients who offer online courses.

IREC ISPQ Standards: Category Applicability						
	CORE	Tier 1	Tier 2	Tier 3	Tier 4	Tier 5
Accredited Training Program	██	██	██	██		Applies to Online Courses
Certified Independent Master Trainer	▤	▤	▤		▤	
Certified Independent Instructor	▓	▓	▓		▓	
Accredited Continuing Education Provider	▥	▥				
Certified Affiliated Master Trainer	▨				▨	
Certified Affiliated Instructor	▨				▨	

The IREC ISPQ Standards are developed through the input of subject matter experts and stakeholders. Subject matter experts from countries participating in the IREC ISPQ framework process have the right to participate in the formation of IREC ISPQ Standards. International governmental and non-governmental organizations, in liaison with ISP, may also take part in the work.

IV. Normative References

The following normative documents contain provisions that, through reference in this text, constitute provisions of this International Standard. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO/IEC Guide 2, Standardization and Related Activities – General Vocabulary

ISO 9001, Quality Management Systems – Fundamentals and Vocabulary

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V. Terms and Definitions

For the purposes of this International Standard, the terms and definitions identified in ISO/IEC Guide 2, ISO 9000 apply. The following terms and definitions also apply:

Accreditation: The qualification of a program or institution by an objective evaluating body as having met the requirements of a set of consensus standards.

Accreditation process: The process by which an evaluating body confirms that a program or institution fulfills specific competence, resource, and/or capability requirements.

Applicant: Person or program applying to the evaluating body to obtain a certificate of competence or validation for a specific area of training.

Auditor: Person with relevant technical and personal qualifications, representing the evaluating body, competent to assess a candidate against the relevant standard.

Candidate: Applicant qualified to commence an evaluation and validation process.

Certificate of Competence: Document issued by an evaluating body that confirms that a named person or program is competent to perform the specified services.

Certification: The qualification of an individual by an objective evaluating body as having met the requirements of a set of consensus standards.

Certification process: Process by which an evaluating body certifies that an individual fulfills specific competence, resource, and/or capability requirements.

Curriculum: Set of courses, course work, and content.

Job Task analysis: Listing of knowledge, skills, and abilities necessary to safely, properly, and reliably perform a specified job, as defined by subject matter experts.

Program: Series of complementary course(s) designed to meet a specific instructional goal including the management and infrastructural systems necessary to deliver the instruction; the complete body of prescribed subjects or studies to prepare students for gainful employment in a recognized vocation, occupation, or profession.

Qualification: Determination that an applicant has fulfilled specific requirements to participate in the accreditation/certification/qualification process.

Quality manual: Document that defines its practices, policies, and procedures for operations and training in an auditable form and in a manner that is reproducible, fair, and regularly evaluated and updated.

Syllabus: An outline and summary of topics to be covered in a course.

Training program: A defined organizational unit, either independent or within a larger organization, designed to deliver defined knowledge and skills instruction and practice to specific outcomes.

Core Requirements

The following core requirements apply to candidates for all six (6) of the current IREC ISPQ recognitions:

Core 1. Non-Discrimination: All IREC ISPQ certification and accreditation candidates and recipients must have written policies as well as active procedures and administrative practices providing for non-discrimination in admitting candidates, training students, providing access to resources, and hiring employees, in compliance with any applicable regulations or statutory requirements. All IREC ISPQ certification and accreditation candidates and recipients must themselves, and any of their staff or contractors, sign a document by which they commit themselves to practicing non-discriminatory training in accordance with written policies.

Core 2. Avoiding Conflict of Interest: All IREC ISPQ certification and accreditation candidates and recipients must have written policies as well as active procedures and administrative practices providing for avoidance of conflicts of interest, both real and perceived, on the part of all management, staff, and contractors. All IREC ISPQ certification and accreditation candidates and recipients must themselves and their staff and contractors sign a document by which they commit themselves to avoid conflicts of interest, both real and perceived.

Core 3. Confidentiality: Except as required in this Standard, or by regulations and statutory requirements, all IREC ISPQ certification and accreditation candidates and recipients must have written policies as well as active procedures and administrative practices providing for the confidentiality of information obtained in the course of training activities. Information that must be kept confidential includes, but is not limited to, any personally identifiable information of students and/or applicants. The responsibility to honor confidentiality extends through all levels of the training process, from individual instructors through the management of programs, including, but not limited to, staff, committee members, or contractors acting on behalf of an IREC ISPQ certification or accreditation candidate/recipient. All IREC ISPQ certification and accreditation candidates and recipients must themselves, and any of their staff or contractors, sign a document by which they commit themselves to safeguarding the confidentiality of training information in accordance with their written policies.

Core 4. Release of Information: All IREC ISPQ certification and accreditation candidates and recipients must have written policies as well as active procedures and administrative practices providing for the release of information gained in the course of training activities about a particular applicant or student only with the written consent of the subject person, unless required otherwise by applicable law. If an IREC ISPQ certification or accreditation candidate/recipient is required by regulation or statutory

requirements to release private information to a third party, the subject shall be informed beforehand regarding: to whom the information will be released; and, what specific information will be released. All IREC ISPQ certification and accreditation candidates and recipients must themselves, and any of their staff or contractors, sign a document by which they commit themselves to a policy providing for the release of personally identifiable information only upon the grounds described above.

Core 5. Commitment to Safety and Safe Practices: All IREC ISPQ certification and accreditation candidates and recipients must have and maintain policies and procedures that: ensure safety and safe practices in the training; and, encourage proper and safe practices in the workforce. All IREC ISPQ certification and accreditation candidates and recipients must themselves, and any of their staff or contractors, sign a document by which they commit themselves to safety and safe practices.

Core 6. Commitment to Professionalism and Quality: All IREC ISPQ certification and accreditation candidates and recipients must have written policies committing themselves to professionalism and quality practice in all aspects of the training. All IREC ISPQ certification and accreditation candidates and recipients themselves, and any of their staff or contractors, sign a document by which they commit themselves to practicing professionalism and achieving quality in all aspects of training.

Core 7. Appropriate Training and Experience: All IREC ISPQ certification and accreditation candidates and recipients (and their staff, where applicable) shall have the necessary education, training, and experience to adequately perform their appointed jobs. Specific experience and education requirements for Certified Affiliated Master Trainers, Certified Independent Master Trainers, Certified Affiliated Instructors and Certified Independent Instructors are contained in Appendix I.

Tier 1

Applicable to Accredited Training Programs, Accredited Continuing Education Providers, Certified Independent Master Trainers, and Certified Independent Instructors

Tier 1.1 Defined Syllabi and Curricula: Candidates for, and those receiving, IREC ISPQ recognition as an Accredited Training Program, Accredited Continuing Education Provider, Certified Independent Master Trainer, or Certified Independent Instructor shall have a defined syllabus for each relevant course and, where applicable, a defined curriculum for each relevant program. In addition, the curriculum or syllabus should be current and must accurately represent what is actually taught.

Candidates for, and those receiving, IREC ISPQ recognition as an Accredited Training Program, Certified Independent Master Trainer, or Certified Independent Instructor must also match their curriculum to an IREC ISPQ-accepted Job Task Analysis. See Job Task Analysis requirement in Tier 2.7 below. Candidates for, and those receiving IREC ISPQ recognition as an Accredited Continuing Education Provider, must demonstrate that their course topic(s) are relevant to renewable energy, energy efficiency, or distributed generation training fields, but do not need to match their syllabi or curricula against an IREC ISPQ-accepted Job Task Analysis.

Tier 1.2 Facilities Requirements: Candidates for, and those receiving, IREC ISPQ recognition as an Accredited Training Program shall have and maintain sufficient facilities in which to conduct their training programs. Candidates for, and those receiving, IREC ISPQ recognition as an Accredited Continuing Education Provider, Certified Independent Master Trainer, or Certified Independent Instructor are not required to own their own facilities, but must warrant that the facilities where they teach will meet the requirements of this IREC ISPQ Standard.

Sufficient facilities are appropriately accessible to students and have adequate ventilation, lighting, work surfaces, presentation materials, and access to lavatory facilities and potable water relative to the volume of anticipated students. Sufficient facilities are also appropriately sized to accommodate planned training activities in a manner that is safe, secure, and appropriately provisioned so as not to impede the learning process of students.

If any ISP-recognized training is conducted off-site or in facilities not owned by the IREC ISPQ candidate, recipient, or their parent institution, the candidate for, or recipient of, IREC ISPQ recognition shall warrant that the off-site facilities meet the IREC ISPQ requirements for sufficient ventilation, lighting, work surfaces, presentation materials, and access to lavatory facilities and potable water. See Facilities Warrant Form.

Tier 1.3 Tools, Equipment, and Hardware Requirements: Candidates for, and those receiving, IREC ISPQ recognition as an Accredited Training Program, Accredited Continuing Education Provider, Certified Independent Master Trainer, or Certified Independent Instructor shall have or cause to be provided sufficient tools, equipment, and hardware to ensure that students have a safe, appropriate, and complete training opportunity for the covered curriculum. This requirement includes providing or causing to be provided: appropriate personal protective equipment, safety materials and equipment, training hardware, and tools.

Tier 1.4 Management of Volunteers: Candidates for, and those receiving, IREC ISPQ recognition as an Accredited Training Program, Accredited Continuing Education Provider, Certified Independent Master Trainer, or Certified Independent Instructor, shall develop and utilize a signed commitment whereby volunteers shall be informed of and agree to comply with the core requirements of this IREC ISPQ Standard.

Tier 1.5 Outsourcing & Contractor Management: Candidates for, and those receiving, IREC ISPQ recognition as an Accredited Training Program, Accredited Continuing Education Provider, Certified Independent Master Trainer, or Certified Independent Instructor shall develop and utilize a written contract with any paid outsourcers or contractors (organizations, individuals, or otherwise) who perform training-related work (training, training documentation, training program management). This contract shall define the relationship between the employer and the outsourcing agent or contractor, and shall hold such agents and/or contractors to the core requirements of this IREC ISPQ Standard.

In addition to a contractual arrangement as described above, candidates and recipients of the Accredited Training Program, Accredited Continuing Education Provider, Certified Independent Master Trainer, or Certified Independent Instructor recognition shall maintain a list of contractors or outsourcing providers, including contact information and designation of the in-house person responsible for the relationship.

Tier 1.6 Record-Keeping and Documentation Systems: Candidates for, and those receiving, IREC ISPQ recognition as an Accredited Training Program, Accredited Continuing Education Provider, Certified Independent Master Trainer, or Certified Independent Instructor shall maintain a record-keeping and documentation system appropriate to their particular circumstances, in compliance with any local laws or regulations, and in such a way as to ensure the integrity of the process and the confidentiality of the information. Candidates for, and those receiving, IREC ISPQ recognition as an Accredited Training Program, Accredited Continuing Education Provider, Certified Independent Master Trainer, or Certified Independent Instructor shall describe their record-keeping and documentation system through appropriate written policies that include commitments to confidentiality, designation of the types of records stored, designation of access to particular records, designation of storage time-frames for various types of records, and description of the proper means of disposing of records once the retention period is past.

The following records must be stored for a defined period of time of not less than one training cycle or one internal-audit period: student application forms; course or instructor evaluation reports; liability waivers and releases; records documenting the development of syllabi and curricula; records

demonstrating the participation of interested parties in the development of syllabi or curricula; records of linkages with the relevant industry; and, other documents relating to student participation in the training. This does not constitute an exhaustive list of the types of records that may need to be identified and stored in order to appropriately document the development and management of the training system.

Tier 1.7 Informational Materials: Candidates for, and those receiving, IREC ISPQ recognition as an Accredited Training Program, Accredited Continuing Education Provider, Certified Independent Master Trainer, or Certified Independent Instructor shall provide prospective students with a current, detailed description of the training, training content, training process (including fees), and criteria by which student outcomes will be evaluated. The information provided in informational and promotional materials shall accurately describe the training, training content, and training process (including fees), as they actually exist. Furthermore, the informational and promotional materials shall accurately identify the criteria by which students will be evaluated at the conclusion of the training course or program.

Tier 1.8 Surveys and Course Evaluations: Candidates for, and those receiving, IREC ISPQ recognition as an Accredited Training Program, Accredited Continuing Education Provider, Certified Independent Master Trainer, or Certified Independent Instructor shall develop, implement, and maintain a survey document that allows students, contractors, and other program participants to provide comments, suggestions, criticisms, complaints, and other feed-back on the training program, or the administration of the training. The results of these surveys, and the survey forms themselves, shall be maintained pursuant to the requirements of Tier 1.6, entitled "Record-Keeping and Documentation Systems," described above.

In addition, candidates and recipients of the Accredited Training Program, Accredited Continuing Education Provider, Certified Independent Master Trainer, or Certified Independent Instructor recognition shall use this feed-back for program maintenance and improvement.

Tier 1.9 Examinations and Assessment Tools: Candidates for, and those receiving, IREC ISPQ recognition as an Accredited Training Program, Accredited Continuing Education Provider, Certified Independent Master Trainer, or Certified Independent Instructor shall, at the conclusion of each course, evaluate student learning outcomes using measurable, objective criteria. Such criteria may include, but are not limited to: attendance; verbal participation; outcome of course projects; and, performance on written or oral examinations. The criteria by which students will be evaluated for a given training course or program shall be made known to the students at the outset of the course or program.

Tier 1.10 Appropriate Staff Size: Where IREC ISPQ certification and accreditation candidates or recipients also act as supervisors or employers, they shall be responsible to employ staff members, instructors, and trainers in adequate numbers to fulfill the organization's work load.

Tier 1.11 Appropriate Employee Training: IREC ISPQ certification and accreditation candidates or recipients acting as employers shall ensure that appropriate training is available to empower employees to do their jobs successfully.

Tier 1.12 Complaint, Dispute, and Appeals Policies: Candidates for, and those receiving, IREC ISPQ recognition as an Accredited Training Program, Accredited Continuing Education Provider, Certified Independent Master Trainer, or Certified Independent Instructor shall have defined policies and procedures for the resolution of complaints, disputes, and appeals received from applicants, students and their employers, customers and clients, and other parties concerning the training process, training content, and the performance of trained persons.

Tier 2

Applicable to Accredited Training Programs, Certified Independent Master Trainers, and Certified Independent Instructors

Tier 2.1 Commitment to Quality: Candidates for, and those receiving, IREC ISPQ recognition as an Accredited Training Program, Certified Independent Master Trainer or Certified Independent Instructor shall have documented objectives for quality, and a written commitment to quality. The top management shall ensure that this policy is understood and implemented at all levels of the organization.

Tier 2.2 Outsourcing & Contractor Management: With regard to outsourcers or contractors, candidates for, and those receiving, IREC ISPQ recognition as an Accredited Training Program, Certified Independent Master Trainer, or Certified Independent Instructor shall:

   a) Take and maintain full responsibility for all outsourced work;

   b) Establish competency and experience requirements for each contractor;

   c) Ensure that the contractor is competent and complies with the applicable provisions of this Standard, and established competence requirements;

   d) Ensure that the activities of contractors do not compromise the confidentiality, objectivity, and impartiality of the training; and,

   e) Define policies and procedures for assessing and monitoring the compliance and efficacy of contractors.

Tier 2.3 Internal Audit or Management Review: Candidates for, and those receiving, IREC ISPQ recognition as an Accredited Training Program, Certified Independent Master Trainer, or Certified Independent Instructor shall have a defined system for at least annual internal review of their management system and procedures, including provisions for continual improvement as well as corrective and preventive actions. *See Tier 3.2 the Staff Assignments for Quality Management requirement, which requires one management staff to have responsibility for this task as part of his/her job description.*

Tier 2.4 Legal Entity: Candidates for, and those receiving, IREC ISPQ recognition as an Accredited Training Program, Certified Independent Master Trainer, or Certified Independent Instructor must demonstrate that they are a legal entity, or that they are part of a legal entity.

Tier 2.5 Minimum Prior Experience: Candidates for, and those receiving, IREC ISPQ recognition as an Accredited Training Program, Certified Independent Master Trainer, or Certified Independent Instructor shall demonstrate that they have carried out the applicable training course/program for a minimum of one (1) calendar year prior to application. If candidates cannot demonstrate this minimum one (1) year requirement, but otherwise meet IREC ISPQ Standards, their award will be provisional for the first year, contingent on successfully demonstrating their ability to continue to meet the IREC ISPQ Standards.

Tier 2.6 Financial Fitness: Candidates for, and those receiving, IREC ISPQ recognition as an Accredited Training Program, Certified Independent Master Trainer, or Certified Independent Instructor must demonstrate that they have the financial resources necessary for the operation of the training

services, and that such resources will cover associated liabilities for a reasonable length of time (not less than the duration of one training cycle).

Tier 2.7 Job Task Analysis Basis for Curriculum or Syllabus: Candidates for, and those receiving, IREC ISPQ recognition as an Accredited Training Program, Certified Independent Master Trainer, or Certified Independent Instructor shall have course(s) or program(s) which are based on an established IREC ISPQ-accepted Job Task Analysis. The syllabi and curricula, together with appropriate prerequisites, shall ensure that participating students will receive sufficient instruction and practice to meet the knowledge and skills competencies of the relevant IREC ISPQ-accepted Job Task Analysis.

Student informational materials shall include a reference to the relevant Job Task Analysis, and shall direct students to where they might consult the Job Task Analysis. See Tier 1.7 entitled, **"**Informational Materials" above.

Tier 2.8 Policies for Curriculum or Syllabus Development & Maintenance: Candidates for, and those receiving, IREC ISPQ recognition as an Accredited Training Program, Certified Independent Master Trainer, or Certified Independent Instructor shall have established policies guiding the development of an appropriate curriculum or syllabus, including definition of the prerequisites that students will need to meet in order to adequately learn the full points of the relevant ISP-accepted Job Task Analysis.

In addition, candidates for, and those receiving, IREC ISPQ recognition as an Accredited Training Program, Certified Independent Master Trainer, or Certified Independent Instructor shall have established policies providing for the maintenance of the curriculum or syllabus, including regular review of the curriculum, syllabi, and prerequisites against the requirements of the relevant IREC ISPQ-accepted Task Analysis.

Tier 2.9 Resource Requirements: Candidates for, and those receiving, IREC ISPQ recognition as an Accredited Training Program recognition shall have and maintain adequate library and research materials and job placement resources for the students' reference and use. Candidates for, and those receiving, IREC ISPQ recognition as a Certified Independent Master Trainer or Certified Independent Instructor shall have and maintain, or shall ensure adequate access to, library and research materials and job placement resources for the students' reference and use.

Tier 2.10 Participation: Candidates for, and those receiving, IREC ISPQ recognition as an Accredited Training Program, Certified Independent Master Trainer, or Certified Independent Instructor shall provide interested and relevant parties significantly concerned with the workforce outcomes of the training with avenues to participate in the development of training content and methodologies.

Tier 2.11 Linkage with Industry: Candidates for, and those receiving, IREC ISPQ recognition as an Accredited Training Program, Certified Independent Master Trainer, or Certified Independent Instructor shall demonstrate that they have and maintain appropriate linkages with the subject industry. See Tier 2.10 entitled, "Participation" above.

Tier 2.12 Application Process: Candidates for, and those receiving, IREC ISPQ recognition as an Accredited Training Program, Certified Independent Master Trainer, or Certified Independent Instructor shall require potential students to submit a completed application form, signed by the applying student, which contains:

a)   The scope of the training program;

b)   A statement that the applying student agrees: to comply with the requirements and directions of the training program; and, to supply any information relevant to safety and medical issues;

c) The description of how the student meets the required education and work experience criteria, including supporting documentation/materials of such educational and employment history; and,

d) The student's personal identification information, including, but not limited to, name, address, and/or other required information.

Tier 2.13 Written Job Descriptions and Reports: Candidates for, and those receiving, IREC ISPQ recognition as an Accredited Training Program, Certified Independent Master Trainer, or Certified Independent Instructor shall provide all training-related staff with clearly documented job descriptions listing their duties and responsibilities, and identifying their supervisors or reports. These instructions shall be kept current through at least an annual review. Written job descriptions and basic staff information (names, resumes) shall be made available for public review upon request.

In addition, candidates for, and those receiving, IREC ISPQ recognition as an Accredited Training Program, Certified Independent Master Trainer, or Certified Independent Instructor must define competency requirements for all training-related staff. Competency requirements must be reviewed at least annually with subject staff to ensure that the requirements remain appropriate.

Tier 2.14 Examinations: If a candidate for, or recipient of, IREC ISPQ recognition as an Accredited Training Program, Certified Independent Master Trainer, or Certified Independent Instructor creates a written or oral examination, it shall be developed and administered according to written organizational policies in a manner that ensures the following:

a) Students are appropriately tested against materials actually presented in the course;

b) Test materials are stored in an appropriately secure fashion;

c) The person overseeing the test shall be appropriately instructed in practices that ensure impartiality and security in the delivery of the examination;

d) The test is presented under fair environmental conditions, including: test administrations where the test proctor does not bias the outcome of the test; students are allowed equal access to any testing aids or material; and, the test environment and facilities are equal for all;

e) Test results (grades) are released or held according to defined policies and in a way that will not unfairly single out individual students for unwanted attention nor violate the IREC ISPQ requirement for confidentiality;

f) There are criteria for defining a passing vs. a non-passing score;

g) The test results shall be documented in a way that gives confidence to both students and other stakeholders that the outcomes are verifiable;

h) Students may review test results, and have access to an appeals procedure if they feel their results have been incorrectly tabulated, or that some degree of unfairness or inconsistency hindered their testing process.

i) A subject matter expert, other than the test developer, has reviewed the test items for accuracy and relevance to the course;

j) The test questions follow standard guidelines for specific types of test items, e.g., multiple choice test questions have only one correct answer, etc,; and

k) There are accommodations for students with special needs.

Tier 3

Applicable to Accredited Training Programs Only

Tier 3.1 Documented Management System: Candidates for, and those receiving, IREC ISPQ recognition as an Accredited Training Program shall have a documented management system ensuring that the requirements of this IREC ISPQ Standard are effectively applied.

A documented management system must include: published and appropriate organizational goals; means of measuring outcomes; and, systems to monitor and correct for the accomplishment of these goals, including at least an annual review of the application and success of the management system. A documented management system describes the organizational structure of personnel, and defines the responsibility flows within an organization. A documented management system also includes the written policies and procedures to ensure that work outcomes meet quality guidelines.

Note: A documented management system based on the ISO 9001:2000 model would be one method of satisfying this requirement.

Tier 3.2 Quality Management Staff Assignments: In accordance with the principles of Quality Management, and in conjunction with the written job descriptions required in the Appropriate Staff Size Requirement above, candidates for, and those receiving, IREC ISPQ recognition as an Accredited Training Program must identify the staff or management officer(s) who are responsible for the following key tasks:

- Defining and updating the prerequisites for entry into the training program;

- Verifying that students entering the training meet the appropriate experience or education requirements;

- Formulating policies and procedures guiding the operation of the training;

- Implementing policies and procedures guiding the operation of the training;

- Overseeing the finances of the training program;

- Overseeing each committee or contractor undertaking defined activities on behalf of the training program;

- Formulating and implementing policies and procedures related to personnel/human resources;

- Developing and regularly revisiting the requirements for staff experience and qualification (both trainers and support staff); and,

- Performing a review (at least annually) of the organization's quality goals and achievement of those goals, with recommendations for improvement or course correction (internal audit).

Tier 4

Applicable to Certified Affiliated Master Trainers, Certified Independent Master Trainers, Certified Affiliated Instructors, and Certified Independent Instructors

Certified Affiliated Master Trainers, Certified Independent Master Trainers, Certified Affiliated Instructors, and Certified Independent Instructors shall, at a minimum:

a) Be familiar with the relevant training syllabus and curriculum;

b) Have a thorough knowledge of the relevant training methods and instruction documents;

c) Have appropriate competence in the field covered in the training;

d) Be able to communicate effectively both in writing and orally (through an interpreter, if necessary) in the language of the training; and,

e) Make known any affiliation or other link that, in perception or in fact, could represent a specific interest or bias in the training program (e.g., commercial affiliation with a particular manufacturer, etc.)

Specific experience and training requirements for individuals applying for IREC ISPQ Certified Affiliated Master Trainer, Certified Independent Master Trainer, Certified Affiliated Instructor, or Certified Independent Instructor recognition are contained in Appendix I.

Tier 5

Requirements for Online Courses

In addition to the requirements in Tiers 1-4, the requirements below apply to candidates that offer online instruction.

a) Instructional and learning goals are clearly defined for the student.

b) The provider must indicate the hardware and software required for the learner to participate.

c) Navigation is easy. If difficulties are encountered during navigation, instructions are given on how to get assistance.

d) The instruction is presented in an organized and sequential learning format.

e) The learning management system should provide the necessary assessment and reporting capabilities to help monitor and track the learning process including students' completion rates and how much time it takes a student on average to complete the online course.

f) Assignments are clear and understandable.

g) Instructor provides timely and specific feedback.

h) Learning shall provide frequent and meaningful interactions between learners and instructional material and between learners and the instructors.

i) Assessment should be an integral part of the learning experience.

j) Course is evaluated by students and includes evaluation of content, instructor, quality of the technical experience and support/assistance that is provided.

k) Course is evaluated on a regular basis for technical design, instructional materials, links, and online delivery applications.

l) Advertising of any type is prohibited within the educational content including, but not limited to, banner ads, subliminal ads, pop-up window ads, or links to promotion of products and or services.

m) The provider must have a mechanism in place for the learner to be able to contact the provider if there are any questions. Response to students must be timely, within 12-24 hours of inquiry.

n) Contingency strategies should be planned to provide a quick recovery from technology-related interruptions.

Appendix I

Experience Requirements for Certified Affiliated Master Trainers, Certified Independent Master Trainers, Certified Affiliated Instructors, and Certified Independent Instructors

In order to become certified as a Certified Affiliated Master Trainer, Certified Independent Master Trainer, Certified Affiliated Instructor or Certified Independent Instructor, an applicant must have a combination of teaching and actual practical experience, as defined below.

Teaching Experience: Includes both general and field-related (solar, wind, etc.) in-classroom or on-site experience. The applicant can also receive credit for any specialized training related to teaching skills or pedagogy they have received (degrees, continuing education courses, etc.).

Practical Experience: May include a variety of industry and field-related work such as: receiving a nationally-recognized field-related credential; service on field-related technical committees; industry experience in sales or marketing; or, actual installation experience.

Finally, an applicant for IREC ISPQ certification has the opportunity to present other information to support their application for certification.

ALL EXPERIENCE MUST BE DOCUMENTED.

Contact Hours: IREC ISPQ's unit of measure for calculating professional experience requirements is the contact hour. One (1) contact hour equates to no less than fifty (50) minutes of classroom time with either: direct student-teacher interaction; or, a planned activity where the learner receives feedback and where his/her progress is monitored (e.g., course labs; computer-assisted instruction; interactive video/CD/DVD; and/or, web site learning).

The requirements for certification as a Certified Affiliated Master Trainer (MT), Certified Independent Master Trainer (MT), Certified Affiliated Instructor (CI), and Certified Independent Instructor are explained in the chart below. Please note that while candidates can use a variety of equivalencies to reach the required number of contact hours, two (2) types of experience are required: candidates must document that they have spent a minimum number of contact hours teaching in their specific discipline (see 1.A of the chart below); and, candidates must document that they have participated in a minimum number of in-the-field installations related to their specific discipline (see 2.1 of the chart below).

In order to become certified as a Certified Affiliated Instructor (CI) or a Certified Independent Instructor (CI), the candidate must be able to document a total of **470 contact hours** consisting of actual teaching experience and practical experience, as explained in the chart below.

In order to become certified as a Certified Affiliated Master Trainer (MT) or Certified Independent Master Trainer (MT), the candidate must have a total of **1280 contact hours** consisting of actual teaching experience and practical experience, as explained in the chart below.

	Contact Hours Required	
	CI	**MT**
Section 1: Teaching Experience		
A. Specific Teaching Experience (Required)		
1) Applicant has performed in-class course instruction focused on the relevant renewable energy, energy efficiency, or distributed generation topic for which s/he is applying for certification.	**min 120**	**min 600**
B. General Teaching Experience (Optional)		
1) Applicant has performed in-class course instruction in any topic (other than the renewable energy, energy efficiency, or distributed generation teaching experience listed above in 1.A).	no minimum	no minimum
2) Applicant has received specialized training in education:		
a. Continuing education courses in pedagogy, teaching methodology, instructional development taken within the last three years	max 50	max 50
b. B.A. in education is worth 60 contact hours	max 60	max 60
c. M.A. in education is worth 60 contact hours	max 60	max 60
This section must total at least:	**220**	**900**
Section 2: Practical Experience		
1) Relevant professional installation experience = 20 contact hours per installation (Required)	**min 60**	**min 100**
2) Nationally recognized professional certification in a relevant renewable energy, energy efficiency, or distributed generation specialty = 30 contact hours	max 30	Max 30
3) Work on a relevant technical committee (i.e. IEEE, NABCEP, IEC, book preparation, etc.) = 20 contact hours per committee	max 20	Max 40
4) Non-field experience in a relevant industry position (i.e. administration, management, sales or marketing within your specialty field) = 20 contact hours per documented year of employment	max 60	Max 100
5) Applicant has received specialized training in the relevant renewable energy, energy efficiency, or distributed generation topic for which s/he is applying for certification:		
a. Continuing education courses in the relevant RE, EE or DG topic taken within the last three years	max 100	max 150
b. Associates degree or vocational or technical certificate in a relevant topic (energy management, electrician, etc.) is worth 40 contact hours	max 40	max 40
c. B.A. or B.S. degree in a relevant field is worth 60 contact hours	max 60	max 60
d. M.A. or M.S. degree in a relevant field is worth 60 contact hours	max 60	max 60
This section must total at least:	**250**	**380**
Grand Total for section 1 and section 2 must equal at least:	470	1280

Other

      If your documented hours do not reach the IREC ISPQ requirements above, please explain why you feel you should still qualify for certification. Some considerations might be: more extensive field experience than required, time spent developing relevant courses, consideration of specialized teaching experience, time spent in student counseling, or successful writing and presentation of peer-reviewed papers on a relevant subject.

      If you are using the "Other" category to justify your bid for certification status, please be detailed yet clear and concise. How many hours did you spend in the activities or efforts that you believe help qualify you for certification? What exactly were the tasks you fulfilled? What was the outcome?

      Format: you can choose to answer this section by creating a table, chart, outline, or by writing a few paragraphs – or any combination that makes your "other" qualifications clear. Please type your response using at least an 11-point font, and print it on pages with 1" margins. Brevity is appreciated.