



*Training, Accreditation,  
Certification, Licensure...  
Making Sense of Credentialing*

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MA Green Career Conference

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Interstate Renewable Energy Council



Interstate Renewable Energy Council

**1982**

**Non Profit**

Tackle difficult issues

Uniform Guidelines & Standards

Quality Assessment



Interstate Renewable Energy Council

- Heavily involved in workforce development, credentialing for the past decade
- IREC is the North American Licensee for the Institute for Sustainable Power's Quality (ISPQ) International Standard for Renewable Energy and Energy Efficiency Training Accreditation and Instructor Certification programs



# Exciting Time for *Green/Sustainability*



Policies & Incentives – Tax Credits – Low Cost Financing – Grant Dollars

## The green economy is growing

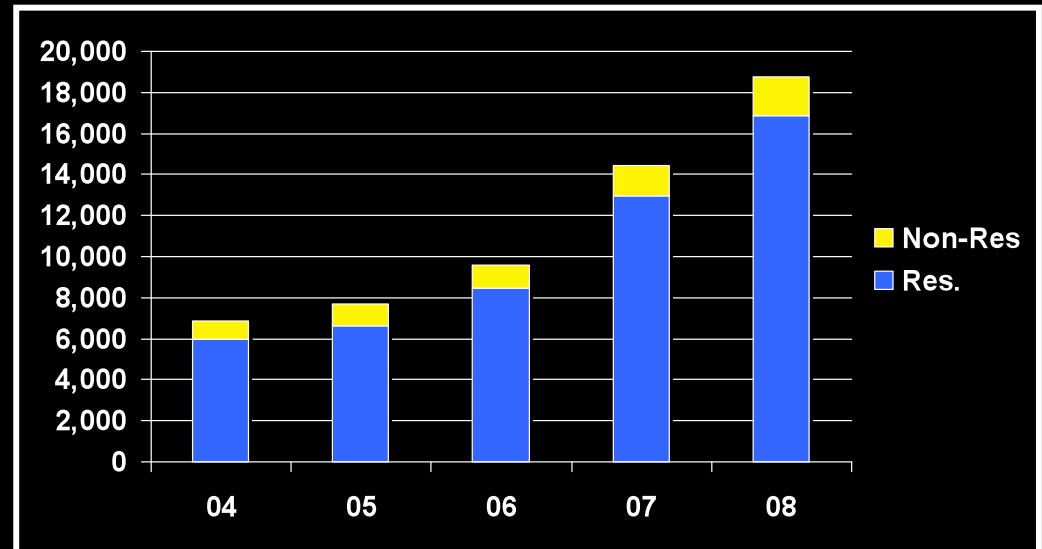
### Top 5 Sectors for Clean-Tech Job Activity (US)

Ranking	Sectors
1	Solar
2	Biofuels & Biomaterials
3	Conservation & Efficiency
4	Smart Grid
5	Wind Power

Source: Clean Edge, Inc., 2009

**Pike Research forecasts that the energy auditing market will triple from \$8.1 billion in 2009 to \$23.4 billion by 2014.**

### Number of Annual Grid-Tied PV Installations



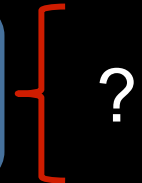
Source: IREC 's Annual Solar Market Trends Report

Credentialing helps develop  
a green workforce.

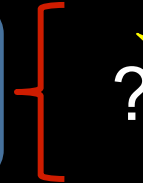
# Accreditation, Certificate, Certification, License



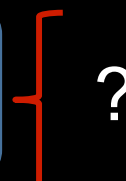
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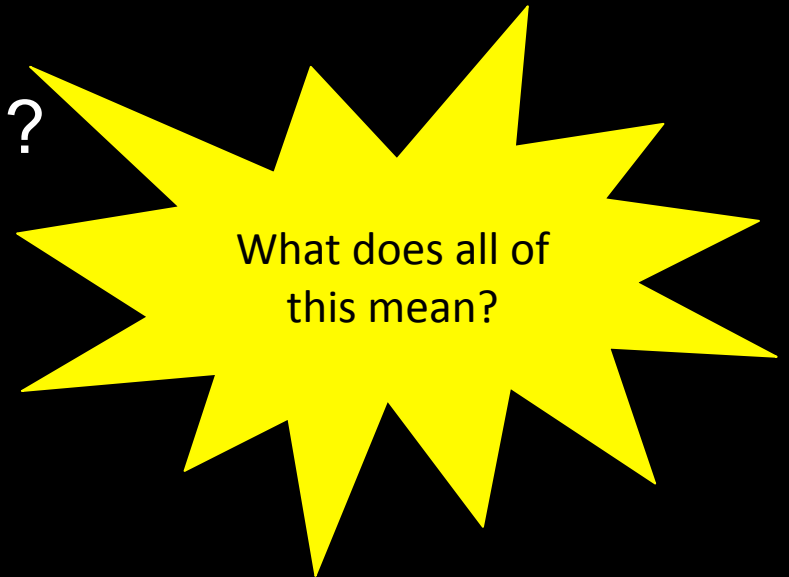
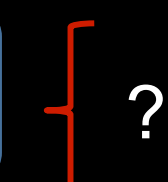
Certification



Entry Level Knowledge



Certificate of Completion



Quality training  
is key to developing  
a green workforce

# Considerations for Quality Training

- Presents the skills and knowledge to prepare the graduate for the job – based on standards (Job Task Analysis)
- Instructors well-versed in technology, codes, installation and teaching
- Consider a diverse student group: pre-requisites
- Plan enough time – the “sink in” factor
- Provide hands-on experience

# ISPQ Accreditation and Certification of Training Providers



IREC is the North American Licensee for the  
ISPQ\* International 01022 Standard for  
Renewable Energy and Energy Efficiency  
Training Accreditation and Instructor  
Certification Programs

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*\*ISPQ – Institute for Sustainable Power Quality Standard*

# ISPQ Assessment



- ❑ System of application, review and audit
- ❑ Provides a means to compare content, quality, and resources across a broad range of training

# 6 ISPQ Designations



1. Accreditation for Training Programs
2. Accreditation for Continuing Education Providers
3. Certification for Independent Master Trainers
4. Certification for Affiliated Master Trainers
5. Certification for Independent Instructors
6. Certification for Affiliated Instructors

# ISPQ Accreditation



Sends signals to students, employers, and government officials that training standards have been met

Ensures legitimacy of what's being taught and by whom

What about certification?

# Value of Certification

NABCEP

- Protects the public
- Establishes standards for professional knowledge, skills and practice
- Assures consumers that professionals have met standards
- Advances the profession

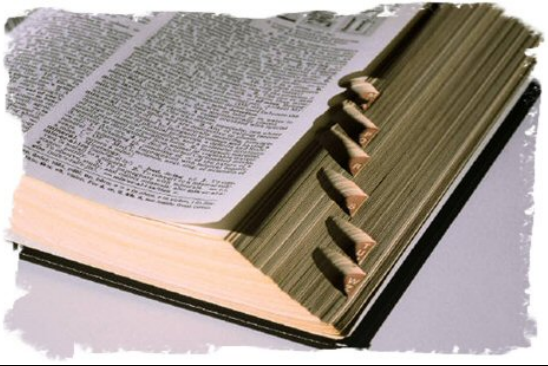
BPI

RISE

UL



# Certification vs Certificate



# Professional certification

demonstrate competence

awarded for a year, two, three...

ongoing assessment

# Certificate

issued after completion of a class or series of courses

a one-time statement about an individual

a snap shot defining an accomplishment

***What about jurisdictional licensing requirements?***

# Licensing Requirements for Solar Installations in MA

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- Always check with local Authority Having Jurisdiction
- Construction Supervisors License or Home Improvement License (to get permit)
- Electrician's license
- Plumber's license

# Certificate, Certification, License



License

- Meet local jurisdictional requirements



Certification

- Hands-on field experience
- Pass exam
- BPI, UL, NABCEP, etc...



Entry Level Knowledge

- Pass the Entry Level Exam

Certificate of Completion

- Attend a workshop or course
- Homework
- Test
- Hands on training



Some useful resources

# Online listing of Renewable Energy Training & Education Providers *(www.irecusa.org)*

The screenshot displays the IREC website interface. At the top left is the IREC logo, followed by the text "Interstate Renewable Energy Council". To the right is a search bar. Below this is a red navigation bar with links: "About IREC", "Programs", "News and Events", "Join IREC", "Make a Donation", and "Contact Us".

On the left side, there is a "Workforce Development" menu with the following items: "University Courses", "Training Providers" (highlighted with a red arrow), "Workforce Development Links", "New Ideas National Conference", and "2008 Presentations".

The main content area is titled "Renewable Energy Training & Education Providers" in red text. Below the title is a map of the United States with numerous red pins indicating provider locations. The map includes state names and major cities. A map control bar at the top right of the map area shows "Map", "Satellite", and "Hybrid" options. The map shows a high density of pins in the Northeast, Midwest, and West Coast regions.

# ISPQ Accredited Training Providers in MA

- Alt E University – [www.altestore.com/classes/](http://www.altestore.com/classes/)
  - Photovoltaic Design and Installation which consists of three courses: 1. Basic PV and Site Assessment (PV 301), 2. Intermediate PV Design (PV 302), and 3. Advanced PV Design and Installation (PV 303). Solar Thermal Design and Installation which consists of two courses: 1. Introduction to Solar Domestic Hot Water (Thermal 301), and 2. Solar Thermal Design and Installation (Thermal 302).
- Springfield Technical Community College - <http://cbt.stcc.edu/>
  - Photovoltaic Practitioner Certificate Program
- HeatSpring Learning Institute – [www.heatspring.com](http://www.heatspring.com)
  - “Solar PV Installer Boot Camp” course



## Resources and Links

### Workforce Development

- ❖ Job development
- ❖ Career guides

### Accreditation & Certification

- ❖ Training
- ❖ Practitioners
- ❖ Equipment

### Job Boards

- ❖ Renewable Energy
- ❖ Energy Efficiency
- ❖ Green Jobs

### Documents

- ❖ Best practices
- ❖ Job trends
- ❖ Training approaches



***New Ideas in Educating a  
Workforce in Renewable Energy  
and Energy Efficiency***

**March 2011 Conference**

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Practitioner training should lead to  
defined workplace knowledge, skills,  
and abilities.

Understand the credentials.

Certificate

Certification

License

Accreditation

# Thank you

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