

NORTH AMERICAN BOARD OF CERTIFIED ENERGY PRACTITIONERS

FINAL REPORT

1. Award Number Name of Recipient	DE-FG36-04GO14348 North American Board of Certified Energy Practitioners (NABCEP)
2. Project Title Principal Investigator	Solar Photovoltaic Installers Certification Program Richard Lawrence rlawrence@nabcep.org
3. Date of Report Period Covered by Report	January 31, 2014 October 1, 2004 – March 31, 2012

4 & 5. Accomplishments

Tasks

Task 1: Review, Revise and Update of the Task Analysis

- Task 1.1 – Review and Edit *Primary target of the Task Analysis*: Determine if description of the primary target is still relevant and/or if other personnel should be included.
- Task 1.2 – Review and Edit *Prerequisites skills necessary for the installer*: Determine if the skills listed is still relevant and/or if additional prerequisite skills should be included.
- Task 1.3 – Review and Edit eight *Specific tasks/skills* listed for the Task Analysis. Determine if all eight existing tasks are relevant. Add new tasks as identified by PV Technical Committee.
 - o Sub Task 1.3.1- Review and Edit *Working Safely with Photovoltaic Systems*.
 - o Sub Task 1.3.2 – Review and Edit of individual sub tasks within the major task, *Working Safely with Photovoltaic Systems*. Edit to ensure sub tasks are still relevant and delete or modify as agreed upon by PV Technical Committee. Adjust Skill Types and Priority/Importance categories accordingly. Add new sub tasks as appropriate.
 - o Sub Task 1.3.3 – Review and Edit of major task: *Conducting the Site Assessment*
 - o Sub Task 1.3.4 – Review and Edit of individual sub tasks within the major task, *Conducting the Site Assessment*. Edit to ensure sub tasks are still relevant and delete or modify as agreed upon by PV Technical Committee. Add new sub tasks as appropriate. Adjust Skill Types and Priority/Importance categories accordingly.
 - o Sub Task 1.3.5 – Review and Edit of major task: *Selecting the System Design*
 - o Sub Task 1.3.6 – Review and Edit of individual sub tasks within the major task, *Selecting the System Design*. Edit to ensure sub tasks are still relevant and delete or modify as agreed upon by PV Technical Committee. Adjust Skill Types and Priority/Importance categories accordingly. Add new sub tasks as appropriate
 - o Sub Task 1.3.7 – Review and Edit of major task: *Adapting the Mechanical Design*
 - o Sub Task 1.3.8 – Review and Edit of individual sub tasks within the major task, *Adapting the Mechanical Design*. Edit to ensure sub tasks are still relevant and delete or modify as agreed upon by PV Technical Committee. Adjust Skill Types and Priority/Importance categories accordingly. Add new sub tasks as appropriate.
 - o Sub Task 1.3.9 – Review and Edit of major task: *Adapting the Electrical Design*
 - o Sub Task 1.3.10 – Review and Edit of individual sub tasks within the major task, *Adapting the Electrical Design*. Edit to ensure sub tasks are still relevant and delete or modify as agreed upon

by PV Technical Committee. Adjust Skill Types and Priority/Importance categories accordingly. Add new sub tasks as appropriate.

o Sub Task 1.3.11 – Review and Edit of major task: *Installing Subsystems and Components at the Site*

o Sub Task 1.3.12 – Review and Edit of individual sub tasks within the major task, *Installing Subsystems and Components at the Site*. Edit to ensure sub tasks are still relevant and delete or modify as agreed upon by PV Technical Committee. Adjust Skill Types and Priority/Importance categories accordingly. Add new sub tasks as appropriate.

o Sub Task 1.3.13 – Review and Edit of major task: *Performing a System Checkout and Inspection*

o Sub Task 1.3.14 – Review and Edit of individual sub tasks within the major task, *Performing a System Checkout and Inspection*. Edit to ensure sub tasks are still relevant and delete or modify as agreed upon by PV Technical Committee. Adjust Skill Types and Priority/Importance categories accordingly. Add new sub tasks as appropriate.

o Sub Task 1.3.15 – Review and Edit of major task: *Maintaining and Troubleshooting a System*

o Sub Task 1.3.16 – Review and Edit of individual sub tasks within the major task, *Maintaining and Troubleshooting a System*. Edit to ensure sub tasks are still relevant and delete or modify as agreed upon by PV Technical Committee. Adjust Skill Types and Priority/Importance categories accordingly. Add new sub tasks as appropriate.

Task 1.4 – Garner input and recommendations from Subject Matter Experts and stakeholders within PV industry to provide input on the Draft Revised Task Analysis. Review all facets of Task Analysis through e-mail and teleconference communications.

Task 1.5 – PV Technical Committee Accepts Input from Subject Matter Experts and stakeholders within PV industry and performs point by point review of recommendations.

Task 1.6 – PV Technical Committee submits final Task Analysis to NABCEP Board of Directors for discussion and review.

Task 1.7 – NABCEP Board of Directors approves final Task Analysis for the Solar PV System Installer

Task 2: Exam Administration

Task 2.0 – Assemble all Exam Questions

Task 2.1 - Establish and Update the Exam Questions. To be performed by Exam Committee, Executive Director and PTI.

Task 2.2 - Conduct Passing Score Study. Involves creation of cut score panel to review exam items and determine passing score.

Task 2.3 - Develop Equivalent Exam Forms. Performed by Exam Committee and PTI

Task 2.4 - Maintain Examination Administration Guidelines. Performed by PTI and Executive Director.

Task 2.5 - Administer Examinations twice per year. Performed by Exam Administrators and Proctors at each exam location.

o Sub Task 2.5.1 - PTI ships sealed, secure exam packages to Exam Administrators

o Sub Task 2.5.2 – Exam Administrators and Proctors manage exam locations and entrance to exam by candidates

Task 2.6 - Scoring and Analysis of Exam Results

o Sub Task 2.6.1 – PTI scores candidate responses and produces grade report for each candidate

o Sub Task 2.6.2 – PTI sends grade report and exam statistics to NABCEP Executive Director with recommendations regarding item adjustment

o Sub Task 2.6.3 – NABCEP Executive Director convenes meeting with Exam Committee to review exam statistics

- o Sub Task 2.6.4 – Exam Committee reviews exam statistics and recommendations regarding item adjustment from PTI and forwards its recommendations to NABCEP Board of Directors.
- o Sub Task 2.6.5 - NABCEP Board of Directors votes to accept or reject recommendations from Exam Committee.
- o Sub Task 2.6.6 - NABCEP Executive Director remits scoring results to all candidates including any item adjustment agreed to in sub task 2.6.5
- o Sub Task 2.6.7 – Exam Administrators and Proctors ship all exam forms back to PTI in sealed, secure packages
 - Task 2.7 - Other Exam Maintenance. PTI performs any additional maintenance as requested by the NABCEP Board of Directors

Task 3: Maintain & Update Critical Program Documents

- Task 3.0 – Review Candidate Handbook prior to its publication and release which is concurrent with publication and release of Application form for NABCEP Solar PV Installer Certification Exam
 - o Sub Task 3.0.1 - Executive Director maintains current file of all necessary adjustments to Candidate throughout program year. Adjustments based on exam administration changes approved by Board of Directors. Adjustments based also on improvement recommendations received from candidates, board members, exam administrators and proctors.
 - o Sub Task 3.0.2 - Executive Director incorporates necessary changes identified in sub task 3.1 and produces revised Candidate Handbook for review and approval by Executive Committee.
 - o Sub Task 3.0.3 – NABCEP Executive Committee reviews Candidate Handbook and submits all modifications to Executive Director
 - o Sub Task 3.0.4 – NABCEP Executive Director performs modifications approved by the Board of Directors and publishes and releases Candidate Handbook
 - Task 3.1 – Review and amend as necessary the NABCEP Study Guide to reflect latest version of NABCEP Task Analysis
 - o Sub Task 3.1.1 - Executive Director convenes meeting of Study Guide Committee to review latest versions of NABCEP Task Analysis and NABCEP Study Guide
 - o Sub Task 3.1.2 - Members of Study Guide Committee make recommendations regarding revisions to educational and informational text contained within Study Guide. Revisions are approved unanimously by members of Study Guide Committee. If unanimity not received, plurality of members approving revisions is acceptable.
 - o Sub Task 3.1.3 - Members of Study Guide Committee make recommendations regarding revisions to sample exam questions contained within Study Guide. Revisions are approved unanimously by members of Study Guide Committee. If unanimity not received, plurality of members approving revisions is acceptable.
 - o Sub Task 3.1.4 - Recommendations regarding all Study Guide revisions received by Executive Director who incorporates revisions into revised Draft of Study Guide.
 - o Sub Task 3.1.5 – Draft of Study Guide remitted to Exam Committee. Exam Committee ensures Study Guide is generally equivalent to current NABCEP Exam. General recommended changes are remitted to Study Guide Committee and Executive Committee.
 - o Sub Task 3.1.6 - Study Guide Committee and Executive Director incorporate general comments of Exam Committee, as appropriate and remit to NABCEP Board of Directors for approval
 - o Sub Task 3.1.7 – Board of Directors approves Study Guide for publishing and release
 - Task 3.2 – Review and amend as necessary changes to NABCEP Governance and Administration Policy Manual

- o Sub Task 3.2.1 – Throughout the year, amendments and changes to Governance and Administration Policy Manual are identified by Board of Directors, committee members and the Executive Director
- o Sub Task 3.2.2 – Executive Director incorporates changes into the Governance and Administration Policy Manual and remits to Board of Director at its Annual Meeting
- o Sub Task 3.2.3 – Board of Directors approves with any recommended changes the Governance and Administration and Policy Manual

Task 4: Outreach to Certificants & Support Services

- Task 4.0 – Provide necessary outreach and support to NABCEP Certificants
- Task 4.1 - Publish quarterly newsletter containing pertinent information and Certification Program updates
- Task 4.2 – Garner input from NABCEP Certificants, Board Members, committee members and colleagues and maintain NABCEP web site containing pertinent information and Certification Program updates
- Task 4.3 – Produce brochures, fact sheets and other public information documents for distribution by NABCEP Certificants, Executive Director, Board Members and committee members at appropriate venues
- Task 4.4 – Convene Ad Hoc Committee for purposes of investigating feasibility of providing reduced insurance rates for NABCEP certificants.

Task 5: Continued Outreach & Education to All Sectors of PV & Related Industries

- Task 5.0 – Continue Outreach to All Sectors of PV Industry to Educate and Inform regarding NABCEP Certification Program
- Task 5.1 – Distribute informational brochures, fact sheets and other public information documents at conferences and fairs as per detailed schedule contained in Activity # 5.
- Task 5.2 – Perform outreach with articles, announcements and other outreach formats to public information outlets as per detailed schedule contained in Activity # 5.
- Task 5.3 – Perform outreach in the form of more in-depth articles to public information outlets as per detailed schedule contained in Activity # 5.

Task 6: Program Support

- Task 6.0 – Conduct at least six (6) meetings of the Board of Directors through telephone conference call and one in person (Annual Meeting) during the year.
- Task 6.1 – Conduct meetings of the Executive Committee as delegated and directed by the full Board of Directors
- Task 6.2 – Conduct four (quarterly) meetings of the Finance Committee including one prior to beginning of fiscal year to review and approve NABCEP budget
- Task 6.3 – Conduct one meeting of the Nomination Committee to put forth nominations for Officers and Board Members
- Task 6.4 – Conduct two meetings of the Exam Committee prior to exam administrations to prepare exam questions
- Task 6.5 – Conduct meeting of the Appeals and Grievances Committee as necessary depending upon appeals and grievances received
- Task 6.6 - Conduct two meetings of the Application Review Committee prior to exam administrations to review applications received from Candidates
- Task 6.7 - Conduct meetings and conferences with legal counsel depending upon issues that arise during the year

Task 7: Program Development: Creation of NABCEP Certificate of Knowledge:

- Task 7.0 – Convene meeting of the ad hoc committee of subject matter experts and academics, “Ad Hoc Certificate of Knowledge Committee”

- o Sub Task 7.01 – Ad Hoc Certificate of Knowledge Committee to review and edit *Primary target of the Task Analysis* section
- o Sub Task 7.02 - Ad Hoc Certificate of Knowledge Committee to review and edit *Prerequisite skills necessary for the student/participant*
- o Sub Task 7.03 – Ad Hoc Certificate of Knowledge Committee to review and edit *Specific knowledge necessary for the student/participant*
- o Sub Task 7.04 – Ad Hoc Certificate of Knowledge Committee to review and edit *Skill Types for the student/participant*
- o Sub Task 7.05 – Ad Hoc Certificate of Knowledge Committee to review and edit *Priority/Importance* ratings for each sub task
- Task 7.1 - Comments on Draft Revised Task Analysis to be made by PV SME's and Educational Experts
- Task 7.2 - Ad Hoc Certificate of Knowledge Committee submits Draft Task Analysis to NABCEP Board of Directors
- Task 7.3 – NABCEP Board of Directors approves Task Analysis
- Task 7.4 – PV SME's and Vocational and Training, Schools and Community College representatives create curriculums
- Task 7.5 – NABCEP Certificate of (PV) Knowledge Exam is developed and administered
 - o Sub Task 7.5.1 – Item banking system (exam questions) is established (first time exam)
 - o Sub Task 7.5.2 - Passing Score Study is conducted
 - o Sub Task 7.5.3 - Equivalent exam forms are developed
 - o Sub Task 7.5.4 - Examination administration guidelines are created
 - o Sub Task 7.5.5 - Exam are administered at vocational and training schools and community colleges
 - o Sub Task 7.5.6 - Exams are scored and analysis performed by PTI
 - o Sub Task 7.5.7 - Other exam maintenance is performed
- Task 7.6 – Exam processing and release of scores at Training and Vocational Schools and Community Colleges.

PHASE 2

Task 8.0 Enhance Operations

NABCEP has made the business decision as of June 1, 2009 to internalize their management activities moving management operations to New York headquarters. Two major activities fall within this task: hiring administrative and operation support staff and locating and moving into new office space that can properly accommodate the operations.

Subtask 8.1. Develop job description for administrative support.

- Subtask 8.2. Post job description.
- Subtask 8.3. Interview candidates.
- Subtask 8.4. Select candidate and negotiate contract.
- Subtask 8.5. Select appropriate office space.
- Subtask 8.6. Move into new office; set up computer networks; communications network; secure documentation and filing area.

Task 9.0. Computer-Based Testing

NABCEP currently administers paper and pencil testing for its credentialing programs. NABCEP will explore converting from paper and pencil testing to computer-based testing (CBT). There are pros and cons to both types of administrations. NABCEP will conduct initial research by talking with subject matter experts within Phase 1.

- Subtask 9.1. Investigate CBT with subject matter experts.

- Subtask 9.2. Develop a preliminary budget for the transition.
- Subtask 9.3. Prepare a pros/cons staff report to present to the Board.

Task 10.0 Maintenance of Current Credentialing Schemes

- Subtask 10.1. Maintain the Solar PV Exam - The Solar PV Exam Committee will hold a 2-day, in-person meeting to develop new exam questions and expand the item bank.
- Subtask 10.2. Maintain the Solar Thermal Exam - The Solar Thermal Exam Committee will meet by phone to develop new test questions.
- Subtask 10.3. Convene the Committee to review and revise the PV Entry Level Certificate of Knowledge Learning Objectives.
- Subtask 10.4. Convene the Committee to update the Solar Thermal Study Guide.
- Subtask 10.5. Monitor the increase/decrease of test takers in all programs

Task 11.0 New Certification for Technical Salespeople

This initial phase will prepare the preliminary framework for the development of a salesperson credential.

- Subtask 11.1. Convene a Committee.
- Subtask 11.2. Develop the outline for a task analysis.

Task 12.0 New Entry Level Certificate of Knowledge for Solar Thermal Systems

- Subtask 12.1. Develop a list of Solar Thermal SMEs for Committee.
- Subtask 12.2. Confirm Committee membership.
- Subtask 12.3. Convene Committee with expert guidance.
- Subtask 12.4. Develop draft learning objectives.

Task 13.0. Continue and Expand Stakeholder Engagement & Outreach.

- Subtask 13.1. Convene Board of Directors Meetings
- Subtask 13.2. Present and exhibit at conferences and meetings including: PV America, Independent Electrical Contractors, Clean Energy States Alliance, Small Wind Conference, Mid West Renewable Energy Fair, Arizona SEA meeting and others.

Task 14.0 Enhance Operations

During this phase of enhancing operations NABCEP will hire a new program manager and an additional administrative support person. This hiring is consistent with the tasks to be delivered during the time period/

- Subtask 14.1. Develop job description for program manager.
- Subtask 14.2. Post job description for administrative support and program manager.
- Subtask 14.3. Interview candidates
- Subtask 14.4. Select candidates and negotiate contract.
- Subtask 14.5. Equip office space accordingly.

Task 15.0. Computer-Based Testing

If the investigation into CBT indicates that it would be prudent to pursue this test model NABCEP will integrate the model into at least one of the test streams it administers.

- Subtask 15.1. Review CBT models for Entry Level Certificate of Knowledge Program.
- Subtask 15.2. Develop a firm budget to transition to CBT.
- Subtask 15.3. Deliver first round of CBT.
- Subtask 15.4. Report to the Board with results, problems, suggested improvements and recommendations to decide if the move to CBT should be continued.
- Subtask 15.5. Develop a draft budget and action plan for transitioning a Certification test to CBT

Task 16.0 Maintenance of Current Credentialing Schemes

- Subtask 16.1. Maintain the Solar PV Exam - The Solar PV Exam Committee will hold a 2-day, in-person meeting to develop new exam questions and expand the item bank.

- Subtask 16.2. Maintain the Solar Thermal Exam - The Solar Thermal Exam Committee will hold a 2-day, in-person meeting to develop new exam questions and expand the item bank.
- Subtask 16.3. The Committee to review and revise the PV Entry Level Certificate of Knowledge Learning Objectives will hold a series of phone meetings and, as necessary inperson meeting to prepare final drafts of Learning Objectives to present for Board approval.
- Subtask 16.4 The PV Entry Level Certificate of Knowledge Test committee will hold a series of phone meetings and a 2-day, in-person meeting to develop new exam questions that reflect the Board approved Learning Objectives and expand the item bank.
- Subtask 16.5. The Committee to update the Solar Thermal Study Guide will hold phone and in-person meetings to prepare a revised Study Guide to present to the Board for approval.
- Subtask 16.6. Monitor the increase/decrease of test takers in all programs.
- Subtask 16.7 Monitor the effect of CBT on increase/decrease of test takers.

Task 17.0 New Certification for Technical Salespeople

This phase will develop a Board-approved Scope and Task Analysis for the Certification. A committee will be seated to take comments on a Board approved Preliminary Scope and Task Analysis and will prepare a final draft for Board approval after the comment period.

- Subtask 17.1. The Committee convened to develop the Scope and Task Analysis will hold a series of phone meetings and, as necessary. in-person meeting to prepare final drafts of the Scope and Task Analysis to present for Board approval.
- Subtask 17.2. Develop the Technical Sales Exam – The Board will appoint a committee to develop the Technical Sales Exam, this committee will hold a series of phone meetings and two 2-day, in-person meeting to develop new exam questions in preparation to offer the first administration of the Exam.

Task 18.0 New Entry Level Certificate of Knowledge for Solar Thermal Systems

- Subtask 18.1. Present draft Learning Objectives to the Board for acceptance
- Subtask 18.2. Convene Test Committee to develop test questions from the Learning Objectives. This Committee will hold a series of phone meetings and, as necessary in-person meetings to prepare test questions for the first administration of the Entry Level Solar Thermal Certificate. This will be a CBT test only.

Task 19.0. Continue and Expand Stakeholder Engagement & Outreach.

- Subtask 19.1. Convene Board of Directors Meetings
- Subtask 19.2. Convene Board of Directors In-Person Meeting
- Subtask 19.3. Convene Board of Directors Strategic Planning meeting
- Subtask 19.4. Present and exhibit at conferences and meetings including; IEC Conference Oct. 09, Solar Power 2009, Oct 09, Workforce Development Nov. 09, and additional and relevant meetings and conferences during 2010 (ASES, Distributor Sales Conferences, Training Conferences, Regional Events, Solar Tour).
- Subtask 19.5. Enhance web site to provide more value to Certificants and Certificate of Knowledge holders.
- Subtask 19.7. Develop and distribute new literature and other marketing collateral to promote existing and new programs.

Task 20.0 Project Management and Reporting

Reports and other deliverables will be provided in accordance with the Federal Assistance Reporting Checklist following the instructions included therein.

NABCEP Policies and Procedures

Candidate Handbook; NABCEP Governance and Administration Policy Manual; Personnel Guidelines;

Exam Administration

Installer Certifications

The NABCEP certification exams for PV and Solar Thermal installers were administered on March 24, 2012. The Board of Directors met on April 23, 2012 to review and approve the scoring of the exam by Professional Examination Services. Results were mailed to candidates during the week of April 23, 2012.

This nineteenth administration of the PV Installer Exam led to the certification of 202 individuals, a 29% increase from the last administration. NABCEP has now awarded the PV Installer Certification to 2,149 installers in North America, which is a 10% increase from the total number certified following the last administration in September 2011.

The administration of the Solar Thermal Installer Exam, also on March 24, 2012, led to the certification of 22 individuals, a 26% decrease from the last administration. NABCEP has now awarded the Solar Thermal Installer Certification to 283 installers in North America, which is an 8% increase from the last administration in September 2011.

The next Installer Certification Exams are scheduled for September 22, 2012, with an application deadline of July 13, 2012.

PV Technical Sales Certification

The third administration of the PV Technical Sales Certification Exam was held at Prometric Testing Centers throughout North America during an exam administration window of January 21 to February 4, 2012. The Board of Directors met on March 12, 2012 to review and approve the scoring of the exam by Professional Examination Services. This exam administration led to the certification of 53 individuals. NABCEP has now awarded the PV Technical Sales Certification to 197 professionals, a 37% increase from the last administration.

The next PV Technical Sales Exam is scheduled for July 21 – August 11, 2012, with an application deadline of May 11, 2012.

Continuing Education

The following new courses were registered as continuing education for NABCEP Certified PV Installers this quarter:

- *Sustainable Solutions- Residential Grid-Tie PV, 8 hours*
- *Quick Mount PV – Solar Roofing Best Practices: Commercial, 2 hours*
- *Midwest Renewable Energy Association – PV Conceptual Design for Solar EV Charging, 16 hours*
- *Midnite Solar – Midnight Solar 2012, 4 hours*
- *Ambassador Energy – Advanced PV Design and Installation, 18 hours*
- *Mage Solar Academy – Fundamentals of Solar Business and Technical Sales, 8 hours*
- *Everest Solar Systems – Principles and Best Practices for Cost-Effective Solar Mounting Solutions, 1 hour*

- Zapotec Energy – PV Systems and Fire Safety, 6 hours
- Thames Electric – Three-Day PV Solar Class, 23 hours
- OnGrid Solar – Economics of Solar, 7 hours
- OnGrid Solar – Solar Sales and Marketing, 7 hours
- OnGrid Solar – Introduction to PV Financing with Leases, PPAs, PACE, and Conventional Loans, 7 hours
- Schletter – Design and Installation of Large Commercial & Utility Solar Mounting Systems, 3 hours
- Schletter – Flush Mount Systems: Design and Product Applications, 1 hour
- Schletter – Layout Software for Large Commercial & Utility Scale PV Systems, 1 hour
- REC Solar US – Introduction to Module Assembly, 1 hour
- REC Solar US – Review of Best Practices in the Field, 1 hour
- SMA America – Sunny Island 1, 5 hours
- SMA America – Sunny Island 2, 5 hours

As of March 31, 2012 NABCEP has 111 registered Continuing Education Courses for NABCEP Certified PV Installers.

The following new courses for Continuing Education for NABCEP Certified Solar Heating Installers were registered this quarter:

- Solar Logic – Using the SolarLogic SLASH-D design software and SLIC Controller, 8 hours

As of March 31, 2012 NABCEP had 25 registered Continuing Education Courses for NABCEP Certified Solar Thermal Installers.

PV Entry Level Program

NABCEP welcomed sixteen new PV Entry Level Exam Providers this quarter:

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| - Berkshire Community College, MA | - Canadian College of Health, Science & Technology, ON |
| - Manchester Community College, NH | - Lehigh Career & Technical Institute, PA |
| - Wytheville Community College, VA | - Kirkwood Community College, IA |
| - Noble Solarly, NJ | - West Virginia University at Parkersburg, WV |
| - Krannich Solar, NJ | - SolPowerPeople Inc., TX |
| - Laborers Union Training & Retraining Trust Fund, CA | - Garden State Science & Technology Institute, NJ |
| - Piedmont Community College, NC | |
| - San Bernardino Community College District, CA | |
| - St. Louis Community College, MO | |
| - Allied American University, CA | |

NABCEP welcomed twelve new Solar Heating Entry Level Exam Providers this quarter:

- | | |
|-------------------------------------|--|
| - Sun Pirate, Inc., CA | - Harrisburg Area Community College, PA |
| - SUNY Ulster, NY | - Naugatuck Valley Community College, CT |
| - Northwestern Michigan College, MI | - Appalachian State University, NC |
| - Solar Energy International, CO | - United Service Training Corp., FL |
| - Gateway Community College, CT | |

- Kirkwood Community College, IA
- Gainesville Job Corps Center, FL
- North Carolina Solar Center, NC

As of March 31, 2012 NABCEP had 293 institutions registered to offer the PV Entry Level Exam and 21 institutions registered to offer the Solar Heating Entry Level Exam. In the 1st quarter of 2012, 1,193 test takers completed the PV Entry Level Exam with 689 passing achievements awarded. NABCEP has now provided Passing Score Achievements to a total of 11,781 individuals since the program's inception in 2005.

While a small number of Solar Heating Entry Level Exams have been administered, not been enough candidates have examined to provide statistically reliable data in order to create a passing score. The Solar Heating Entry Level Exam committee will be meeting in early May to conduct a standard setting exercise in order to develop a passing score.

Outreach & Education

Conferences, dealer trainings

NABCEP continues to communicate frequently with stakeholders through its website and by sending press releases. The following is a list of articles communicated to stakeholders through the website and/or by email:

- January 19, 2012: Entry Level Provider Newsletter Jan. 2012
- February 7, 2012: Winter Newsletter 2012
- February 22, 2012: Early Bird Deadline for NABCEP CE Conference
- March 14, 2012: NABCEP Continuing Education Conference Nears Sellout
- March 27, 2012: Number of NABCEP PV Technical Sales Professionals up 30% - Next Exam Schedule Announced

NABCEP continues to utilize Twitter and Facebook social media applications to reach out to and engage with a wider audience.

Conference Activity

NABCEP attended the following conferences during this quarter:

- NABCEP exhibited and presented at the AEE Dealer Convention in Orlando, FL; January 30 – February 1, 2012.
- NABCEP exhibited at the COSEIA Solar Power Colorado Conference in Denver CO, February 8-10, 2012.
- NABCEP exhibited at the PV America West Conference in San Jose California, March 19-21, 2012.

Using Media in Outreach

NABCEP published ads in the following publications:

- Full Page ad in the December/January issue of Home Power Magazine
- Full Page ad in the February/March issue of Home Power Magazine
- Full Page ad in the December/January issue of Solar Pro Magazine

- Full Page ad in the February/March issue of Solar Pro Magazine

NABCEP also took out Banner advertisements with RenewableEnergyWorld.com to advertise the application deadline for the PV and Solar Heating Installer Exams.

Program Support

- The Board of Directors met by conference call on February 6, 2012
- The Board of Directors had a special meeting by conference call on March 12, 2012 to review and approve the results of the PV Technical Sales Exam
- The Board of Directors met by conference call on March 26, 2012

ANSI Accreditation

The final year of the 5 year accreditation cycle for the PV Installer Certification Program will end in September 2012. NABCEP staff has begun preparing for ANSI 17024 re-accreditation of the PV Installer Certification Program and accreditation of the Solar Heating Installer Certification Program.

Enhancements to Website and Operations

The improvements to the NABCEP website/database, called “my NABCEP,” have been substantively completed. The first major module of the database development, the Entry Level component, has been significantly reviewed through an extensive prototype stage and is in final beta-testing by staff. The other major module, the Certification component, has also undergone substantial prototype development and is nearly ready for beta-testing. The improved website/database will significantly reduce the staff time required to review applications by requiring all applications to be complete with files attached before the application can be submitted. It will also resolve many technical issues and streamline operations. In order to provide consistency and reduce confusion for applicants for certification, the website will become public immediately following the next application deadline for installer exams, July 13, 2012.

6. Cost Status

Please see SF-425, Financial Status Report filed for this quarter.

7. Schedule Status

Milestone	Anticipated Date	Status
NABCEP PV Technical Sales Exam Administration	January 21 – February 4, 2012	Complete
NABCEP Solar Heating Installer Exam Committee Meeting	January 23-25, 2012	Complete
NABCEP PV Installer Exam Committee Meeting	January 25-27, 2012	Complete
AEE Dealer Conference	January 29 – February 1,	Complete

	2012	
NABCEP Board Meeting	February 6, 2012	Complete
NABCEP PV Technical Sales Exam Committee Meeting	February 7-8, 2012	Complete
Colorado Solar Power (COSEIA) Conference	February 8-10, 2012	Complete
SEIA Installer Safety Seminar	February 14-15, 2012	Complete
PV America West Conference	March 19-21, 2012	Complete
SolarTech Leadership Summit	March 7-8, 2012	Complete
NABCEP Special Board Meeting	March 12, 2012	Complete
NABCEP Installer Exam Administration	March 24, 2012	Complete
NABCEP Board Meeting	March 26, 2012	Complete

8. Changes in Approach.

None

9. Problems

NABCEP continues to work on correcting financial reporting errors that were made during Phase 2 of the project as identified in the A-133 audit report submitted to DOE. An outside accounting firm, Teal, Becker, and Chiramonte has assisted NABCEP with this process and has concurred with the methodology used to recalculate allowable expenses charged and program income generated in accordance with the Statement of Project Objectives. NABCEP staff is preparing corrected financial reports for all affected quarters and will remit a final correction when completed.

NABCEP has continued to maintain open communications with the DOE to correct the errors made and has provided regular progress updates. As requested by the DOE, NABCEP submitted revised-based-on-actuals SF424A and PMC123 forms for the entire project through December 31, 2012. NABCEP is confident that the final reporting will clearly outline how NABCEP has completed all project objectives within the scheduled timeframe, that all program income was applied to the project expenses, and that NABCEP contributed significantly more resources than originally budgeted in order to accomplish the objectives without additional resources from the DOE or other federal agencies.

NABCEP completed a DOE-ordered audit via KPMG in December 2013.

10. Changes in Key Personnel

Bob Donald was promoted from part time Controller to full time Controller.

11. Product/Technology Transfer

Not applicable.