

# GREEN JOBS GREEN NEW YORK: WORKFORCE DEVELOPMENT OPERATING PLAN

## INTRODUCTION

The Green Jobs Green New York (GJ/GNY) Workforce Development Operating Plan (WDOP) outlines the New York State Energy Research and Development Authority's (NYSERDA) role and responsibilities in implementing the Workforce Development components of the Green Jobs Green New York Act of 2009. Workforce Development activities are a critical component of GJ/GNY. The ability of the program to meet its goals of energy retrofits depends in large part on the ability of the workforce development activities to commence immediately. Therefore, the Workforce Development component of the Operating Plan is being submitted in advance of the Comprehensive Operating Plan.

On October 9, 2009, Governor David Paterson signed into law the Green Jobs Green New York Act of 2009 (A.8901/S.5888 and chapter amendment A.9031/S.6032). The Act directs NYSEERDA to establish and administer the program within six months of the effective date.

For workforce development and training initiatives, the legislation directs NYSEERDA to:

- establish standards for energy audits based on building type and other relevant considerations;
- enter into contracts to provide employment and training services to support the Green Jobs Green New York Program.

Further, the GJ/GNY Program is designed to create job opportunities, including opportunities for new entrants into the state's workforce, focusing on the long-term unemployed and displaced workers and new workforce entrants.

## WORKFORCE WORKING GROUP

On November 18, 2009, NYSEERDA established a Workforce Working Group<sup>1</sup> to help identify workforce development and training needs associated with the Green Jobs Green New York

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<sup>1</sup> The Working Group included representatives from the *NYS Department of Labor*, Tony Joseph and Amy Savoie; *Consortium for Worker Education*, Rebecca Lurie; *Ulster County BOCES*, Virginia Carrig; *Laborers International Union of North America*, Myles Lennon; *Earth Kind Energy*, Ron Kamen; *Green Homes America*, Dick Kornbluth; *Workforce Development Institute*, Paul Shatsoff; *Peter Young Housing-Industries-Treatment*, Jackie Gentile and Bill Baffe; *32BJ Thomas Shortman Training Program*, James Barry; *Center for Working Families*, Chloe Tribich; *Building Performance Institute, Inc.*, Larry Zarker; *Sustainable South Bronx*, Miquela Craytor; *Oilheat Associates, Inc.*, John Levey; *Small Business Development Corp.*, William Brigham; *CUNY BPL*, Mike Bobker; *Hudson Valley Community College-*

Act. The Workforce Working group was asked to identify the workforce training needs necessary to implement the GJ/GNY program, taking into consideration the specific requirements of the Act and workforce development and training activities already being implemented across the state.

The Working Group held 5 meetings, and then the working group was broken into five Subgroups to further discuss workforce needs, and make recommendations in four categories, combining the recommendations of the Curriculum Development and Non-Constructions Jobs subgroups as follows:

- Equipment and Training Infrastructure Needs
- Certifications and Company Accreditation
- Apprenticeships/Internships/On the Job Training (OJT)
- Curriculum Development and Non-Constructions Jobs

On January 4th, 2010, the full Workforce Working Group convened for the day to discuss the recommendations of each subgroup. The WDOP presents the recommendations of all subgroups<sup>2</sup>, and addresses other immediate training needs in support of the GJ/GNY Act. Solar Thermal and Oil Heat Efficiency training recommendations are also included in the curriculum development plan since these are two new technology areas covered in the GJ/NY Act that are not sufficiently funded through the System Benefits Charge (SBC) and the Energy Efficiency Portfolio Standard (EEPS). SBC and EEPS programs have focused primarily on technologies that address electric energy savings. Finally, funding support is also being recommended for a clean energy training conference and other technology transfer activities related to workforce development.

## GJ/GNY WORKFORCE DEVELOPMENT STRATEGY

The success of the legislative goals of the GJ/GNY Act will require widespread implementation of energy efficiency and clean energy measures requiring an expanded workforce, composed of experienced contractors, displaced workers, unemployed, and new workforce entrants. Over the past several years, NYSERDA has administered funds to support training programs that have reached over 6,500 workers, and will reach an additional 6,200 workers through an expanded effort funded under the Energy Efficiency Portfolio Standard. This achievement has established a workforce training infrastructure that includes 13 Center for Energy Efficiency and Building Science (CEEBS) locations, 32 renewable energy learning centers, and many other training partners with the capability to help support the demands of this legislation. The numbers of workers already trained, however, must be tripled in order to support the GJ/GNY goals over the next five years. To achieve these goals, NYSERDA will engage existing contractors to immediately deliver services, leverage existing contractor relationships by structuring direct-

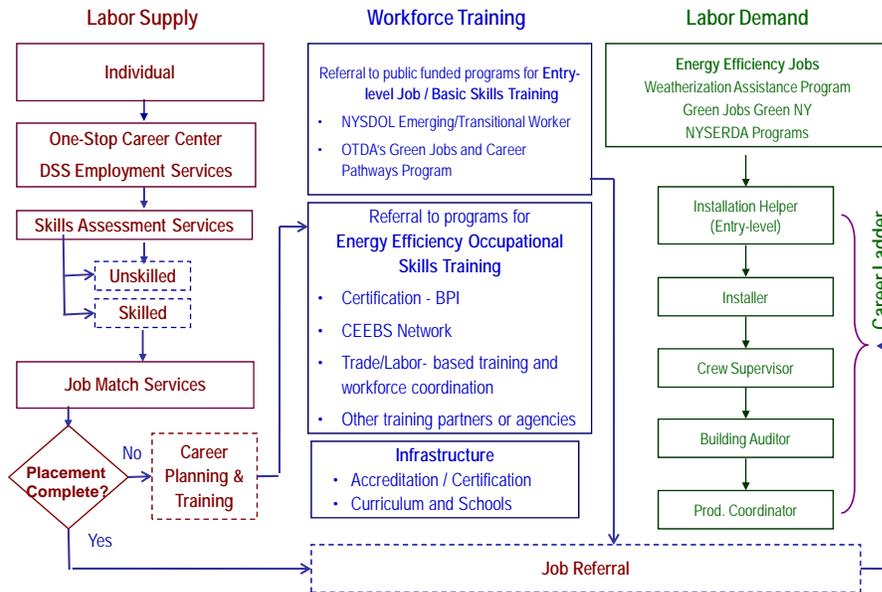
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*CEEBS*, Paula Hayes; *NYS Builders Association*, Phil Larocque; *Community Environmental Center*, Claudia Edwards; *Green City Workforce*, Lisbeth Sheperd; *Apollo Alliance*, Jeff Jones; and *IBEW 236*, Rick Cataldo.

<sup>2</sup> The recommendations for the non-construction jobs subgroup were related to curriculum development needs, and therefore are included along with all other recommendations from the curriculum subgroup.

entry apprenticeship and internship incentives as a method to help defray staffing costs, build increased training infrastructure through the expansion of existing training centers, furnish new equipment, and restructure field testing and certification examination protocol to help ramp up the number of participants to be trained over the next year. The following model outlines key areas of coordination between NYSEERDA, NYS DOL, and other workforce development partners needed to deploy a comprehensive workforce development strategy.

### Green Jobs Green New York Workforce Development Framework



## EQUIPMENT AND TRAINING INFRASTRUCTURE NEEDS

### OBJECTIVES

NYSEERDA workforce development efforts funded under GJ/GNY will be aligned with program strategies that promote the widespread implementation of energy efficiency and clean energy measures and will help provide meaningful employment opportunities for displaced workers, long-term unemployed and new workforce entrants. Workforce training initiatives must assist people through the process of recruitment, career planning and training, and certification. Subsequent steps include placement, and employee mentoring or other On-the-Job (OJT) training to help ensure quality work based on sound principles, and to help gain the most energy savings from the installation of energy efficiency measures. Training equipment, video conferencing, training/simulation houses, and hands-on diagnostics and other training approaches are needed to master skills, pass certification exams, and enable businesses to employ newly trained workers that must deliver a quality work product.

## RECOMMENDATIONS

### *OUTREACH TO PAST PARTICIPANTS*

Identify, during training, those students who intend to achieve certification. Survey, identify, and market additional opportunities for certification under GJ/GNY Act to past training program participants. Encourage those students that previously dropped out of the program, or decided not to complete the certification exam, to proceed with certification leading toward new employment. Recruit these potential participants to hands-on workshops. **Budget: \$25,000.**

### *CREATE WORKSHOPS*

Create workshop series and other curriculum to support GJ/GNY needs. **Budget: \$880,000.**

- Short review/practice workshops providing technicians the opportunity to get hands-on practice with the tools necessary to pass the certification exam, addressing: blower door skills, combustion testing, using smoke sticks, carbon monoxide detection and combustion appliance zone testing, solar thermal installation skills, etc.
- Hands-on skills development workshops/CEUs for new and experienced technicians: advanced insulation installation, leak identification and remediation techniques, gas leak detection and repair, training on ENERGY STAR appliances, window and door repair/replacement techniques, lighting, basic water conservation, ducts and duct blasters, heat pumps, small business development, software and computer skills, and solar panel installer, including roofing issues.
- Small commercial energy audit workshops and field work to facilitate hands-on practice with energy calculations and other tools used by energy consultants.
- Hydronic design for multifamily and small commercial /non-profit sectors.
- Construction “inspection”/verifier workshops akin to HERS Rater training.

### *EQUIPMENT INCENTIVES AND OTHER TRAINING INFRASTRUCTURE NEEDS*

Equipment incentives and equipment lending programs will be offered so certification candidates and contractors have the necessary tools to take the field exams and start businesses. Video conferencing between NYSERDA and participating providers will be enabled to assist with cost-effective technology transfer between participating training partners and the public. All technology areas (oil and gas heating, solar thermal, and other building science training) will be supported. **Budget: \$670,000.**

### *ESTABLISH LAB HOUSES FOR FIELD-TESTING AND CERTIFICATION*

Build and use lab houses and look for opportunities to use municipal buildings and existing houses (compensating owners) for training and certification exams. **Budget: \$800,000.**

### *EXPAND FIELD EXAMINATION CAPACITY*

Work with training centers to schedule the field certification exam during the training to provide a more seamless path from training to certification. Provide funds to develop more BPI field exam proctors, Every BPI affiliate in New York should have multiple field proctors. **Budget: \$150,000.**

# CERTIFICATIONS AND COMPANY ACCREDITATION

## OBJECTIVES

NYSERDA has supported the development of standards and related certifications in the home performance and multifamily sectors, and seeks to develop a standard for the commercial sector and in other areas where a certification standard does not currently exist. The residential program funded under GJ/GNY will require work to be completed by accredited contractors. The Multifamily Performance Program will be served by BPI certified technicians as well as competitively selected contractors, whereas the small commercial and non-profit sector will be served by competitively selected contractors that meet minimum professional requirements and have demonstrated experience in the small commercial sector. The objective of the Workforce Development effort is to help workers in completing the required certifications, and then support contracting firms and other employers through integrated internships, apprenticeships, and other forms of On-the-Job training as they seek to employ experienced and newly certified workers. NYSERDA has been a strong supporter of the Building Performance Institute (BPI), the Institute for Sustainable Power (ISP), and the North American Board of Certified Energy Practitioners (NABCEP) to help assure quality auditing and installation practices. The long term objective is to leverage the development and use of national credentials to help ensure minimum performance standards and quality assurance for all work completed under the GJ/GNY Act.

## RECOMMENDATIONS

### *BPI ACCREDITATION*

A BPI Accredited contractor is committed to educate consumers on a whole house comprehensive approach even when a comprehensive package of services is not accepted. BPI Accreditation helps ensure that the accredited contractor has all the tools and techniques necessary to impress upon the customer the value and importance of the offer, while still allowing the flexibility to perform a limited scope of work if that is accepted and appropriate.

BPI Accredited companies agree to employ BPI Certified Professionals in sufficient quantity and designation at each business location to ensure ability to conduct testing to BPI Standards, review work scopes, and sign off on certificates of completion. A minimum of one, full time Building Analyst (BA) and one, full time specialty designation (e.g. Heating Professional), according to the work to be performed, is required. The BA and specialty designation can be held by the same individual.

- 1) In order to meet the demand for Home Performance contractors, NYSERDA should require BPI accredited companies and organizations seeking BPI accreditation to work with individuals that have not yet attained BPI certification, so long as the value of the subcontracted work does not exceed 20 percent of the volume of business of the BPI Accredited organization. All residential work covered by BPI standards that is subcontracted to the accredited organization by a non-accredited general contractor must conform to the terms of the Accreditation Agreement.

2) NYSERDA should continue to allow contractors to obtain company accreditation through a staged process. BPI recognizes that companies seeking accreditation may require additional help in meeting the requirements of the Accreditation Agreement while continuing to provide traditional business services to their customers. In the first 12 months of the accreditation period, the BPI Accredited contractor must complete a minimum of 25% of its total residential jobs in conformance with BPI Standards. Upon renewal and during the second 12 months of accreditation, the BPI Accredited contractor must complete a minimum of 50% of its total residential jobs in conformance with BPI Standards. After 24 months, upon renewal, the BPI Accredited contractor must agree to conform to BPI Standards on all residential projects.

#### *CURRICULUM RECOGNITION AND ACCREDITATION*

NYSERDA should engage in discussion with the Institute for Sustainable Power, or other appropriate entity, to recognize and accredit training curriculum as compliant with BPI certification requirements. Although BPI has provided this function in the past, BPI seeks assistance in establishing an independent party to serve in this role so as to better comply with ANSI/ISO17024 standards. **Budget: \$100,000.**

#### *APPROVE AND ACCREDIT INSTALLER/TECHNICIAN CURRICULA*

NYSERDA should work with an appropriate entity to recognize and accredit installer/technician level curricula that cover hard skills necessary to be work-ready. These skills may lead to certification, or may simply meet task analysis requirements of the GJ/GNY program. Training components should prepare workers to describe how various energy systems work, including, but not limited to, hot water, ductwork, ventilation, air conditioning, heating, and lighting. Workers should also be able to describe how energy conservation principles function including, but not limited to, air and duct leakage, the effects of weatherization methods on the home, heat loss characteristics, and reducing energy use. Functional worker skills shall include the skill to locate building envelope leaks, select and properly use diagnostics testing equipment and various products to seal leaking areas, and weatherize windows and doors. **Budget: \$50,000.**

#### *INSTALLER AND HEATING CERTIFICATIONS*

In specialty building science areas where NYSERDA has not yet identified a certification requirement for performing GJ/GNY work, NYSERDA should issue a request for qualifications for third-party certifications already recognized by employers and the industry. The certification should either be currently in conformance with ANSI/ISO 17024 quality standards, or must be compliant no later than December 2011. New installer certifications should include hands-on and written assessments, and should verify proficiency in installer-level work to be performed relevant to the Green Jobs Program, including, but not limited to, window replacement, insulation installation, air sealing, and duct work installation and sealing for heating and ventilation applications. Prerequisites shall include a background in building science and auditing fundamentals, occupational health and safety, and required relevant health and safety certifications.

NYSERDA should seek to fund the development of two specialty heating certifications, one for specialty in oil-fired forced air furnace installation, and one for a specialty in gas-fired forced air

furnace installation. The gas forced air furnace installation certification must include ACCA Quality Installation standards. Both new specialty certifications must include building science, and combustion health and safety components. These new certifications will incorporate a written exam in building science and health and safety concepts, and include a field test component as already required for the general Heating Specialist Certification. NYSERDA should seek to establish reciprocity between BPI and other nationally recognized certifications such as already coordinated with the North American Technician Excellence (NATE) certification, and to specifically include reciprocity with the National Oil-heat Research Alliance (NORA) Silver and Gold certifications as replacement for the written test currently required for the general Heating Specialist Certification. **Budget: \$100,000.**

#### *COMMERCIAL AUDIT CERTIFICATION*

NYSERDA has supported the development of standards and related certifications in the home performance and multifamily sectors, and seeks to develop a standard for the commercial sector. To the extent that the GJ/GNY legislative goal is to further expand the number of green jobs in New York State, it becomes more critical to establish a national performance standard including the skills and knowledge requirements necessary to conduct a small commercial energy audit. New and incumbent workers could then be trained and evaluated against this standard in an effort to develop a sustainable pool of quality providers in the growing green economy. The long term goal is to leverage the development and use of a national credential, such as certifications offered through the Association of Energy Engineers (AEE), ASHRAE, and other professional organizations, to help ensure minimum performance standards and quality assurance. NYSERDA should issue an RFP to create an energy audit certification standard for auditing small commercial and not-for-profit buildings. The certification should be in conformance with ANSI/ISO 17024 standards and should be administered by an independent third party credentialing organization. **Budget: \$300,000**

#### *SUPPORT NEW NABCEP SOLAR THERMAL PROGRAMS*

NYSERDA recommends support for the development of NABCEP's: 1) Entry Level Program for Solar Thermal Careers and; 2) Solar Thermal Technical Sales Program. With this funding, NABCEP will develop exams and study materials based upon task analyses that will be done for the Entry Level and Technical Sales Programs. These task analyses will define a general set of knowledge, skills, and abilities typically required for solar thermal careers, along with associated requirements for the assessment and credentialing of practitioners, and the requirements for accrediting related training and educational programs. NYSERDA should work with NABCEP to develop and deploy a process to accredit renewable energy companies as qualified solar providers. **Budget: \$250,000.**

## APPRENTICESHIPS/INTERNSHIPS/OJT

### OBJECTIVES

The Workforce Development effort must advance the skills of new workers, provide job-related experience, and help connect new workers to the marketplace. Apprenticeships, internships,

and other forms of OJT will be deployed to rapidly increase the number of skilled workers in the energy efficiency field. Success can be achieved by effectively addressing three challenges:

- 1) Advancing skills of new/vulnerable workers with training in a work-like setting without undermining pay structures for skilled workers and the budget constraints of employers;
- 2) Rapidly increasing the quantity of skilled workers in energy efficiency; and 3) Connecting trainees to existing jobs.

## RECOMMENDATIONS

### *NYS REGISTERED APPRENTICESHIP AND CERTIFIED CONSTRUCTION TRAINING PROGRAMS*

Enhance existing standards for NYS Registered Apprenticeship Programs to include weatherization, energy efficiency and green building certification principles. Journeyman-level workers with these skills would meet qualifications as certified workers for GJ/GNY business. Such programs should be identified as affiliated with GJ/GNY as “qualified” training programs. Any newly developed curriculum to be incorporated into existing apprenticeship programs should be consistent with the GJ/GNY needs assessment and should include both hand-on and analytical instruction in key competencies relevant to the work required by the program. However, sponsoring a NYS Registered Apprenticeship Program should not be a requirement for contractor bidding on work being financed by GJ/GNY.

Enhance existing standards for certified building trades training programs to include weatherization, energy efficiency and green building certification principles. Individuals who attain these skills would meet qualifications as certified workers for GJ/GNY businesses. Examples of these training programs include those administered by the Home Builders Institute (educational arm of the National Association of Home Builders). Such programs should be identified as “GJ/GNY affiliated” certified training programs. **Budget: \$800,000.**

### *GREEN JOBS WORK READINESS PROGRAMS*

Coordinate with GJ/GNY outreach initiatives to recruit entry-level workers to be employed by participating GJ/GNY contractors. These new workers may be graduates from one of many programs that meet training standards for green collar jobs including, but not limited to, the following state funded programs: Career Pathways; Pathways out of Poverty; Emerging and Transitional Worker Training; and Disconnected Youth Training. These training programs should be recognized as “GJ/GNY affiliated” green jobs work readiness training programs. **Budget: \$300,000.**

### *INTERNSHIPS AND OJT*

Fund internships and OJT to support businesses committed to hiring and employing graduates of Green Jobs Work Readiness programs. Where possible, these funds should target populations with barriers to employment or to employees that demonstrate a need for training through an assessment process. This support will serve as an incentive to help graduates obtain work experience. It is also likely that a percentage of the OJT/Internship hires would become full-time unsubsidized employees of the business. Positions may involve any role that meets the needs of the GJ/GNY program. For example, businesses will need to ramp up staff

quickly to serve the increased demand for small commercial energy audits to be financed through GJ/GNY. OJT and internships will offer an important mechanism for commercial energy auditors to gain field experience, which cannot be met by classroom training or certification alone. To ensure high-quality training, all trainees whose employment is facilitated by OJT funds will be required to be trained in key, measurable competencies toward program-wide certifications or measurable skill-based outcomes, and/or to be trained by recognized training providers. Contractors, and other employers seeking OJT training funds, must require those employees classified as “trainees” to participate in the approved training program, including instruction in the proficiencies relevant to the job title that the worker is training for, and instruction toward worker certifications, as appropriate. **Budget: \$1,325,000.**

#### *DIRECT ENTRY INTO NYS REGISTERED APPRENTICESHIP PROGRAMS*

Individuals who complete training from a GJ/GNY affiliated green jobs work readiness program and who have worked on a GJ/GNY financed job, should be deemed eligible for “direct entry” into a NYS Registered Apprenticeship Program. Incentives should be made available to sponsors of apprenticeship programs for direct entry hiring, where the incentive payment is based on attaining approved time-phased milestones. **Budget: \$200,000.**

#### *BUSINESS, COMMUNITY AND LABOR INTERMEDIARY*

Establish regional intermediaries to work with businesses, community based organizations, labor organizations, and training providers to assure that training programs offered under GJ/GNY address contractor needs. Work with potential employers to implement strategies to actively recruit graduates of GJ/GNY affiliated training programs. This effort will be coordinated with other program implementation efforts.

#### *WORKER/JOB CLEARINGHOUSE*

NYSERDA shall coordinate with NYS DOL to establish a mechanism to feed a clearinghouse with information on trainees, graduates and jobs. The development of a worker/job clearinghouse will help to effectively connect labor demand with labor supply. The NYS DOL already has funding to support the development of this clearinghouse.

#### *EVALUATION*

View the use of the intermediary and the OJT dollars as a pilot project and have a protocol for regular evaluation. These evaluations should weigh the intermediary, the training and the internships against their benefit to the contractors, to the unemployed/emerging workers, the rehiring workers and to the communities from where GJ/GNY is investing. Assure that evaluations examine overall performance of GJ/GNY training, certification, internships, and apprenticeships, and its multiple goals such as job placement, employee performance, and job retention.

# CURRICULUM DEVELOPMENT AND NON-CONSTRUCTION JOBS

## OBJECTIVES

To support a comprehensive approach to energy efficiency in the small commercial and non-profit sectors, the Workforce Development effort must support development of new curriculum to build industry skills for a growing number of workers supporting the small commercial sector. To support the “whole house approach” in the residential sector, existing curriculum must be updated to meet the needs of GJ/GNY Act.

## RECOMMENDATIONS

### *TRAINING CURRICULA INVENTORY*

Create an inventory of existing curricula to better understand how New York State's current training system addresses key worker competencies relevant to the GJ/GNY Program, and to better coordinate existing programs and identify new curricula needs. The inventory should evaluate curricula based on the following characteristics and identify specifically how each supports the Program: prerequisites; languages; geographical area; length of course; target populations; proficiencies and skills covered; equipment used; related job titles; related curricula: certificates awarded; tests administered; ability to enable contractors, constituency-based organizations and/or NYSERDA to meet the GJ/GNY Act's requirements (i.e. local hiring in 'target communities,' M/WBE capacity-building etc.). NYSERDA should meet with SUNY and the NYS DOL to discuss the Labor Market Intelligence grant and its ramifications for developing a curricula inventory, and NYSERDA should solicit proposals to further develop the curriculum evaluation criteria and the inventory. This should include a provision for updating and maintaining the curriculum. **Budget: \$150,000.**

### *NEEDS ASSESSMENT*

Complete a needs assessment to identify what specific skill gaps persist, job categories needed, and which areas training curricula must address. This needs assessment should take the form of a contractor survey. The survey should include questions on OJT, skills desired, and gaps in training capacity. NYSERDA should coordinate with DHCR to begin a preliminary contractor needs assessment through Weatherization sub-grantees, and solicit proposals to develop the needs assessment survey building on any preliminary information from DHCR/WAP sub-grantee coordination. **Budget: \$125,000.**

### *DEVELOP SMALL COMMERCIAL ENERGY AUDIT TRAINING*

New training is needed to develop skills, knowledge, and awareness of new workers in small commercial and non-profit energy auditing. NYSERDA has defined a “standard” for small commercial energy audits, and will need to increase auditing capacity in this sector. NYSERDA should develop a training program developed specifically for small commercial energy auditing, and have the training be an essential part of an individual (or a company) becoming qualified to conduct audits. This will enable NYSERDA to expand the auditing capacity through training, and

will lead toward the longer term objective to implement a certification in small commercial energy audit which is needed to further ensure quality assurance of services offered in this market sector. **Budget: \$300,000.**

#### *OIL HEAT EFFICIENCY TRAINING*

Workforce training and development activities targeting heating system efficiency should focus on proper specification, quality installation, and maintenance of oil heat based systems in the residential, multi-family and small commercial/non-profit sectors. **Budget: \$300,000.**

#### *DEVELOP SOLAR THERMAL TRAINING AND ISP ACCREDITATION*

NYSERDA recommends support for the development of solar thermal training and train-the-trainer courses; code official training; integration of solar thermal training into energy efficiency curricula; training materials and equipment for solar thermal; and the application for ISP Accreditation. NYSERDA will expand the network of solar thermal training providers, with the goal of achieving ISP Accreditation of Programs and Instructors **Budget: \$300,000.**

#### *WORK READINESS SKILLS COURSES AND PREREQUISITES*

Designate training programs to administer crucial soft and foundational skill instruction. Green Jobs Work Readiness Organizations should cover general workplace skills, eco-literacy and provide instruction in the following areas:

- Construction: Basic Construction Skills, Tool Identification and Use, Construction Math, OSHA 10-hour Construction Safety, Certified Lead Renovator Asbestos Awareness, Hazard Communication, Mold/Indoor Air Quality Awareness, and
- Homeowner/Community Outreach: Community Organizing, Documentation Protocols, Sales, Office Administration, and
- Auditing: Basic Building Construction Knowledge, Basic Safety Skills, Aptitude for “Hands-on” Learning (coordination/dexterity), Computer Knowledge (Familiarity with Windows and Basic Keyboarding Skills, Math Skills at Basic Algebra Level, Calculator Knowledge to Perform Basic Math Functions (addition/subtraction/multiplication/division), Application of a Multitude of Research Information, Written and Verbal Problem Solving Skills, Decision Making Skills, Team Work/Team Building Skills.  
**Budget: \$250,000.**

#### *UPDATE EXISTING CURRICULUM*

NYSERDA should continue to work with CEEBS, BPI, and other training entities to examine the existing residential auditing curricula and other training to be administered through CEEBS and other training entities on an ongoing basis, identify areas in need of improvement, and update curricula as required. **Budget: \$200,000.**

#### *HOMEOWNER/COMMUNITY OUTREACH CURRICULUM*

NYSERDA should issue a solicitation for proposals for a standardized curriculum covering homeowner/community outreach strategies. **Budget: \$150,000.**

### *CLEAN ENERGY NATIONAL CONFERENCE AND WORKSHOPS FOR TRAINERS*

Co-sponsor a fourth national conference on *New Ideas in Educating a Workforce in Renewable Energy and Energy Efficiency* in Albany, NY. NYSERDA has been the primary sponsor for three years, with substantial funding also provided by the U.S. Department of Energy and the NYS Department of Labor. The conference focused on instructional strategies, curricula development, job forecasts, career pathways, hands-on training, state and federal initiatives, partnerships, and credentialing programs; all topics that are valuable to implementing clean energy training and job creation programs. **Budget: \$125,000.**

### *CONTRACTOR EXCHANGE CONFERENCES*

NYSERDA recommends funding three conferences for clean energy contractors to exchange information, resources, and specific experiences in the clean energy field. **Budget: \$150,000.**

### *TRAIN-THE TRAINER AND TRAINER EVALUATION*

NYSERDA should evaluate the efficacy of existing training programs and their trainers. Such an evaluation should specifically consider the extent to which pedagogical approach and subject matter proficiency affect the quality of training. Such an evaluation should look at both the results of trainees on certification exams and employment, and include a one-page electronic evaluation form completed by trainees. This effort will be coordinated along with other evaluation efforts.

## BUDGET

Program Component	Annual Budget (\$)	Solicitation	# of Participants
<b>Equipment and Training Infrastructure</b>	<b>2,525,000</b>		
Outreach to Past Participants	25,000	PO	
Create Workshops	880,000	Issue RFP	
Equipment Incentives	600,000	Expand PON 1816	
Equipment Incentives – Video Conferencing	70,000	BTOP Federal	
Establish Lab Houses for Field-testing & Certification	800,000	Expand PON 1816	
Expand Field Examination Capacity	150,000	Issue RFP	
<b>Certifications and Company Accreditation</b>	<b>800,000</b>		
Curriculum Recognition and Accreditation (BPI)	100,000	ST 9991	
Approve and Accredite Installer/Tech Curriculum	50,000	Issue RFP	
Installer and Heating Certifications	100,000	Issue RFP	
Create Commercial Audit Certifications	300,000	Issue RFP	200
NABCEP Certifications and Company Accreditation	250,000	ST 15610	
<b>Apprenticeships/Internships</b>	<b>2,625,000</b>		
NYS Registered Apprenticeship and Certified Construction Training Programs	800,000	Issue RFP	300
Green Jobs Work Readiness	300,000	Issue RFP	
On the Job Training/Internships	1,325,000	Issue RFP	380
Direct Entry into NYS Registered Apprenticeship	200,000	Issue RFP	100
<b>Curriculum</b>	<b>1,775,000</b>		
Training Curriculum Inventory	150,000	Issue RFP	
Needs Assessment Survey	125,000	Issue RFP	
Small Commercial Energy Audit Training	300,000	Expand PON 1817	
Oil Heat Efficiency Training	300,000	Expand PON 1817	
Solar Thermal Training	300,000	Issue RFP	
Work Readiness Courses	250,000	Expand PON 1816	
Update Curriculum	200,000	Issue RFP	
Homeowner/Community Outreach	150,000	Issue RFP	
<b>Conferences and Technical</b>	<b>275,000</b>		
Clean Energy Conference for Trainers	125,000	ST 9991	
Contractor Exchange	150,000	Issue RFP	
<b>TOTAL NYSERDA WFD BUDGET</b>	<b>8,000,000</b>		

Note: Solicitations will be issued as soon as possible upon funding approval.