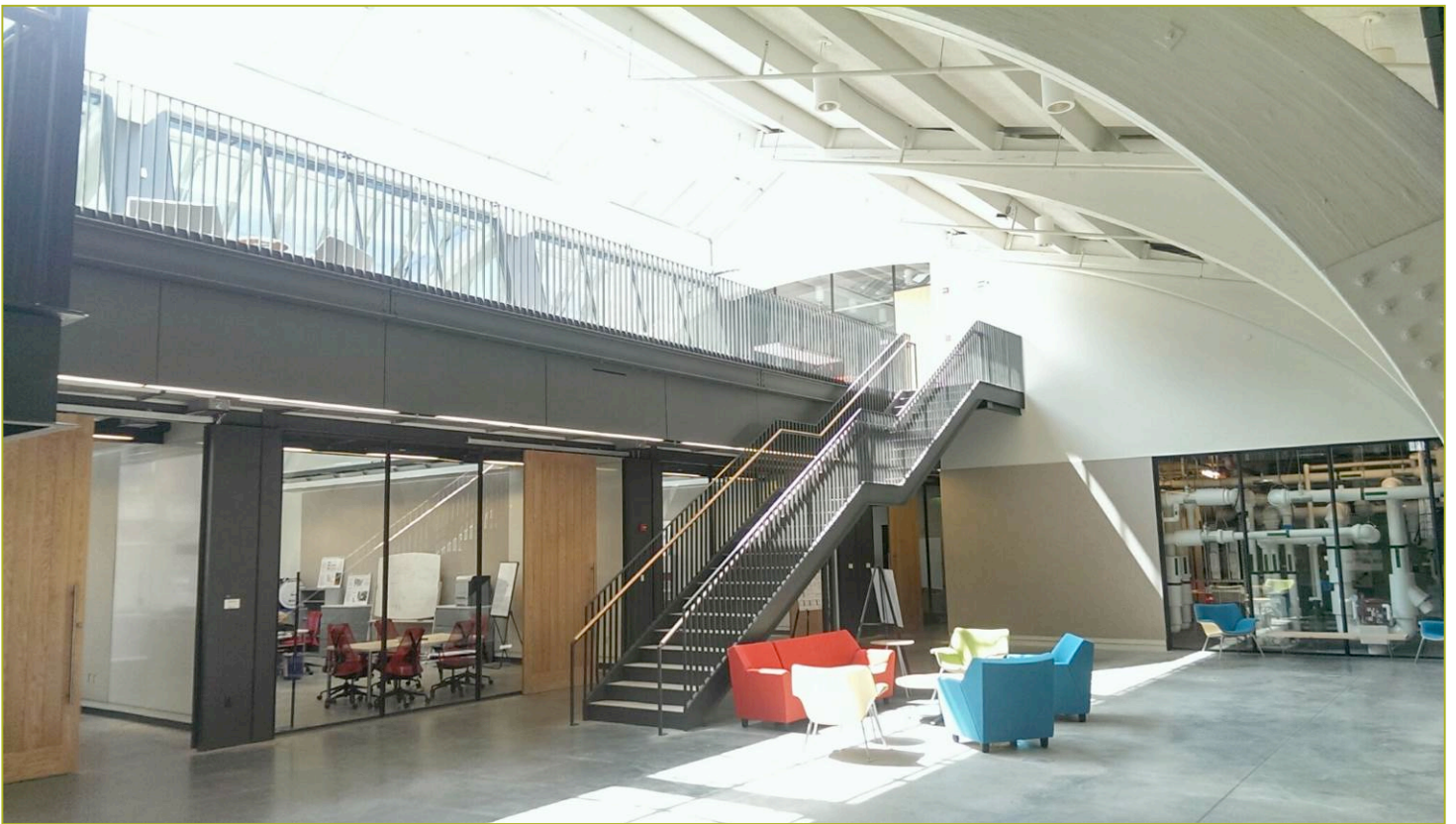


**Title: Certificate of Proficiency in Benchmarking
Training and Credentialing Program**

Report Date: April 28, 2016

Report Author: Terra Meierdierck





Report Abstract

Project objectives will be to: develop an outreach plan and support the program's national deployment in cooperation with USEPA and NRDC; upgrade the program in response to user feedback; incorporate two planned updates to USEPA's Portfolio Manager and two additional curriculum modules developed in collaboration with EPA and NRDC; promote the program to cities and relevant stakeholders across the country; and develop a business plan and revenue model for maintaining and sustaining the Certificate program after BP5.

NJIT believes our new price point of \$250 will ensure the long term sustainability of the Certificate of Proficiency in Benchmarking. The price point was changed early in 2016, without any push back about the new price. The price of the credential is still relatively low, in comparison to other professional credentials, keeping it affordable for municipal works and building operators to afford. Going forward, NJIT will make an effort to market both the Certificate of Proficiency in the Asset Score Tool, when we are marketing the benchmarking credential. We would like users to come to us as a training resource for both tools.

Contact Information for lead researcher

Name: Terra Meierdierck

Institution: New Jersey Institute of Technology

Email address: tmm@njit.edu

Phone number: 908.456.5399

Contributors

Deane Evans, NJIT

Terra Meierdierck, NJIT

Erica Cochran, CMU

Certificate of Proficiency in Benchmarking Final Activity Report

The national Certificate of Proficiency in Benchmarking has been deployed through the following venues and communication sources:

1. The USEPA's Portfolio Manager Training Resources page on the Energy Star website has the credential and training program listed as one source of training for Portfolio Manager.
<http://portfoliomanager.supportportal.com/link/portal/23002/23010/ArticleFolder/2104/Training>
2. Salt Lake City Community College has just integrated the CPB curriculum and the credential in to the college's workforce and development training program. This summer the first course was launched. NJIT is providing support and looking at how this curriculum will work on the college level, in addition to professionals.
3. NRDC has confirmed that Orlando and Kansas City have agreed to have the credential as part of their new legislature in 2016 and continue to push the credential as an important benchmarking data quality resource to the City Energy Project cities.
4. Montgomery County, MD is exploring the requirement of the credential as part of their new benchmarking ordinance. Terra Meierdierck is working with the Energy Program Manager to integrate the curriculum in to their Community College's curriculum as a first step.

We have been in discussion with New York City, which is in the process of revising their benchmarking ordinance. There is still a possibility that the credential could be a requirement for contractors in the future. NYC is interested in receiving the draft of our business plan, once completed, to assess the cost to the contractors and building owners.

2 New Curriculum Modules

NJIT developed 2 facility specific modules over the course of BP5. The topics were chosen based off user feedback and the 4 user surveys – what education the market needed. Multi Family Housing was created in the first half of BP5, out of a response to municipalities with benchmarking ordinances. There was consistently a problem, issues or concerns about how to properly benchmark Multi Family Housing, which we addressed in our module. The second



topic is How to Apply for Energy Star Certification. We had a huge response from Greenprint, PREI and USEPA, along with training program users, about wanting to apply for Energy Star Certification, after completing the benchmarking process. This module was created as a guide to assist users through the application process.

Summary of All Program Updates

Portfolio Manager 101 and 201

Portfolio Manager 101 and 201 is an introduction to the ENERGY STAR Portfolio Manager tool. This lesson shows participants:

- How to navigate Portfolio Manager
- How to add a single property and enter details
- How to enter energy and water consumption data
- How to share properties
- How to generate reports and track progress
- How to respond to data requests.

Portfolio Manager 301

Portfolio Manager 301 demonstrates for participants how to use some of the more advanced features of Portfolio Manager including:

- Editing existing property information
- Correcting and updating historical information
- Using baselines and goals
- Using the reporting feature to analyze performance
- Using the sustainable buildings checklist

Portfolio Manager 401

The intention of Portfolio Manager 401 is to address the current quality assurance/quality control issues. This includes:

- Addressing areas of confusion for the average user
- Providing answers to frequently asked questions
- Benchmarking a portfolio of buildings
- Looking at known issues and common challenges in the new portfolio Manager
- Identifying common errors in entering consumption data



Portfolio Manager 501

Engaging the student in a lesson where they can use their knowledge from the previous 4 lessons, Portfolio Manager 501 will walk students through the process of actually entering the data in to Portfolio Manager. Students will:

- The students will register for an account on Portfolio Manager and create a building profile, based on a sample building.
- Convert sample data and enter it in to the Portfolio Manager Account.
- Upload and add data using Portfolio Manager's upload feature
- Run quality data checks and resolve all alerts
- Troubleshoot issues by using ENERGY Star's FAQ section of their website

2 Webinars

NJIT hosted 2 webinars in BP5. The first webinar was held in January with PREI and Greenprint for their users, whom have to use Portfolio Manager prior to submitting their information to Greenprint's reporting system. Data quality has been an issue in their system; they are hoping by having their users take the courses and receive the credential they will reduce their quality assurance/quality control issues. On April 14th, NJIT held a webinar from the Navy Yard in conjunction with the City Energy Project and NRDC for their municipalities, exploring options of how they can integrate the training program in to their ordinances and help desks.



Certificate of Proficiency in Benchmarking Business Plan

I. Mission

Across the U.S. there is growing support for benchmarking building energy and water consumption, driven both by local legislation and voluntary interest in understanding and improving building performance. In an effort to improve the quality of self-reported benchmarking information, a coalition of national and local organizations came together to develop the Certificate of Proficiency in Benchmarking® program, which certifies that an individual has completed training in benchmarking methods using the U.S. Environmental Protection Agency's ENERGY STAR Portfolio Manager® tool and has successfully completed an exam on the material.

II. Training Program Summary

The Certificate of Proficiency in Benchmarking® program's free, online interactive training component consists of seven distinct modules that teach users how to effectively collect benchmarking information and use the U.S. EPA's free, online ENERGY STAR Portfolio Manager® Tool. Each module is approximately hour long.

III. Summary of All Program Upgrades

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Facility Specific Modules



NJIT developed 2 facility specific modules over the course of BP5. The topics were chosen based off user feedback and surveys – what education the market needed. Multi Family Housing was created in the first half of BP5, out of a response to municipalities with benchmarking ordinances. There was consistently a problem, issues or concerns about how to properly benchmark Multi Family Housing, which we addressed in our module. The second topic is How to Apply for Energy Star Certification. We had a huge response from Greenprint, PREI and USEPA, along with training program users, about wanting to apply for Energy Star Certification, after completing the benchmarking process. This module was created as a guide to assist users through the application process.

Exam Format

The Certificate of Proficiency in Benchmarking® exam is comprised of 40 randomly delivered multiple-choice questions and must be completed within 90 minutes. The exam is computer-based, administered online and without supervision. Exam questions and answer options are displayed on the screen. To qualify to take the Certificate of Proficiency in Benchmarking® exam, candidates must have completed the four training modules within the previous 12-month period.

Continuing Education Credit

The Certificate of Proficiency in Benchmarking® training modules and exam will qualify candidates for 4 hours of continuing education units (CEU) toward USGBC and AIA credential maintenance.

IV. Outreach Plan

NJIT worked with CMU to comprise a target marketing list for the remainder of BP5, with CMU developing an outline and a plan for market engagement. The timeline was as follows:

Week 1	Feb 22 - Feb 28	Research for Market Engagement Plan
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- Review Energy Star Portfolio Manager tool and online learning resources
- Suggest Improvement of Energy Star Portfolio Manager and online learning resources
- Draft stakeholder presentation and market engagement plan
- Make a contact list of potential stakeholders/partners for outreach

Week 2	Feb 29 - Mar 6	Develop Market Engagement Plan
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- Presentation to CBPD team
- Prepare separate presentations for group are/aren't familiar with Energy Star Portfolio Manager
- Plan a schedule for On/Off-line outreach
- Draft brochure/campaign contents for email and social media network
- Add more contact list of potential stakeholders/partners for outreach

Week 3	Mar 7 - Mar 13	Contact Stakeholders/partners and Set up Social Network Accounts
---------------	-------------------	---

- Presentation to CMU students
- Contact local potential stakeholders/partners, aim to set up meetings:
 - o **Pittsburgh Council City District 1-9**
(<http://pittsburghpa.gov/council/contacts>)
 - o **Pittsburgh Office of Sustainability:**
(<http://pittsburghpa.gov/innovation-performance/leadership>)
 - o **University of Pittsburgh Center for Energy**
 - Danielle Ilchuck: 412.624.7476
 - o **EnergyStar Partner list of Governments, Schools, Businesses aimed at improving energy efficiency**
 - Mercy Hospital of Pittsburgh
 - Giant Eagle Incorporated
 - Heinz North America
 - PPG Industries, Inc
 - University of Pittsburgh Medical Center
 - Northgate School District
 - Mt. Lebanon Baptist Church
 - Mt. Lebanon Baptist Church
- Set up Facebook and Twitter accounts for Energy Star Portfolio Manager

- Develop Brochure/Campaign contents for Email and Social Media Network
- Draft a short survey to collect feedback

Week 4	Mar 14 – Mar 20	Continue to Contact Stakeholders/partners and Post Contents on Social Media Network
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- Hold meetings with potential stakeholders/partners
 - Contact potential corporate partners (locally accessible)
 - o Carnegie Mellon Potential Stakeholders:
 - Department of Architecture Professors:
 - **Omer Akin (Head of Dept.)**
 - **Mary-Lou Arscott (Associate Head)**
 - **Donald Carter: Remaking Cities Institute Director**
 - **Jeremy Ficca (director of dFAB)**
 - **Erica Harp (Social Media Coordinator)**
 - o Better Buildings Partners:
 - **Chipotle**
 - **Best Buy**
 - **Dunkin Brands**
 - **Kohls**
 - **Macy's**
 - **Wendy's**
 - **Walgreens**
- Post on social media accounts
- Find contacts for official Facebook and Twitter pages to post about Energy Star Portfolio Manager:
 - o **DOE**
 - o **EPA**
 - o **EnergyStar**
- Analyze results from short survey

Week 5	Mar 21 - Mar 27	Continue to hold meetings and presentation, Update Social Media Network
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- Hold meetings with potential stakeholders/partners
 - o Pittsburgh Certified Green Buildings
 - **David L. Lawrence Convention Center**
 - **PNC Firstside Center**
 - **Children's Museum of Pittsburgh**
 - **Point Park University Dance Complex**
 - **Phipps Conservatory Welcome Center**
 - **Senator John Heinz History Center**
 - **WYEP Radio Station**
 - **Greater Pittsburgh Food Bank**
 - **Carnegie Mellon University Stever**

House

- **Pittsburgh Glass Center**
- Continue to contact stakeholders/partners
 - Schupp Companies, Vienna VA
 - RVA, Falls Church VA
 - PNQK, Los Angeles CA
 - Mirae Asset Global, Los Angeles CA
 - Sintes, Silver Spring, MD
- Post updated contents on social media accounts
- Conduct a short survey at meeting, via follow up email and social media network

Week 6	Mar 28 - Apr 3	Continue Stakeholders Outreach and Collect Feedback
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- Continue to hold meetings with potential stakeholders/partners
- Continue to contact stakeholders/partners
 - HOK, Washington DC
 - RTKL, Washington DC
 - Leo A Daly, Washington DC
 - IDR Architect, Korea
 - Weber Rector Commercial Real Estate, Manassas VA
- Contact Federal Agencies and Contractors
 - FAA

- State Department
- Department of Veterans Affairs
- Lockheed Martin
- Continue to post updated contents on social media accounts
- Continue to conduct a short survey and collect feedbacks
- Suggest to include a short survey at the end of online course and credential exam to collect feedback

Week 7	Apr 4 - Apr 10	Continue Stakeholders Outreach and Collect Feedback
---------------	----------------	--

- Continue to hold meetings with potential stakeholders/partners
- Continue to contact stakeholders/partners
- N.E.E.D, New York NY
- Circumpacificus, New York NY
- River, New York NY
- Juhyun Architect, New York NY
- Architect, San Francisco CA
- ECARDI, Shanghai China
- Contact Institutions
- Georgetown University, Washington DC
- George Mason University, Fairfax VA
- Inha University, Korea
- Seoul National University, Korea
- Contact CMU Alumni, Students, and Professors
- Kristine Fallon Associates, Chicago IL
- KAIST, Korea
- Hongik University, Korea
- Continue to post updated contents on social media accounts
- Continue to conduct a short survey and collect feedbacks

Week 8	Apr 11 - Apr 17	Continue Stakeholders Outreach and Collect Feedback
---------------	-----------------	--

Updated:

- Find out the energy star related web pages in each county's web site, and ask to post about Certificate of Proficiency in Benchmarking program
- Arlington County

- Fairfax County
- Continue to contact stakeholders/partners
- Passive House Western PA group
- Haos, Korea
- MCM group, Korea
- WDG Architecture, Washington DC
- Peabody Architecture, Alexandria VA
- Praxis3, Atlanta GA
- Continue to post updated contents on social media accounts
- Facebook posts
- Create Twitter account to get attention from DOE, EPA, and official EnergyStar accounts
- Continue to conduct a short survey and collect feedback

Week 9 | Apr 18 -
Apr 24

Analyze feedbacks and comments

- Continue to contact stakeholders/partners
- Continue to post updated contents on social media accounts
- Facebook posts
- Create Twitter account to get attention from DOE,
- Collect and analyze all feedbacks and comments from stakeholders
- Draft the result of Market Engagement Plan
- Email out updates on progress of engagement plan

Week 10 | Apr 25 -
Apr 30

Suggest Future Market Engagement Plan

- Continue to analyze feedbacks and comments
- Finalize the outcome of Market Engagement Plan
- Suggest the Future Market Engagement Plan

V. Business Plan: Strategy and Implementation Summary

Post BP5 Enrichment and Updating Activities

Scenario	Available Funds	Real Time Topical Webinars	More Electives	Case Studies	Addition of a FAQ Section	Video	Animation	External Partner Support
1	\$15,000	x	x	x	x	x		
2	\$25,000	x	x	x	x	x	x	
3	\$50,000	x	x	x	x	x	x	x
4	\$100,000	x	x	x	x	x	x	x

Marketing

Scenario	Available Funds	Attend Events	Surveys	Channel Partner Promotions	Media Relations	Partner Relations	Events Convened	Exhibit at Events
1	\$3,750	x	x	x				
2	\$12,500	x	x	x	x	x		
3	\$25,000	x	x	x	x	x	x	
4	\$50,000	x	x	x	x	x	x	x

ENRICHMENT AND UPDATING ACTIVITIES

Real Time Topical Webinars

Real time topical webinars are a great way to engage the public, attract new users, and to find out what information users are seeking. With the assistance of subject matter



experts, we can create valuable information based webinars, that will be memorialized on the CPB training website.

More Electives

Portfolio Manager features different building use types that should have building type specific training modules. Municipalities are able to provide Portfolio Manager 101 and 201 training through their training network, but the USEPA does not currently offer training support on the different building types.

Case Studies

Providing a library of benchmarking case studies could give users different resources and ideas for potential energy conservation measure to implement, after they have set a baseline for their building. Case studies could also feature difficult benchmarking cases – similar to the Philadelphia Zoo – and how the benchmarker was able to overcome barriers, properly benchmarking the property.

Addition of a FAQ Section

CBK has a vision of creating a forum based FAQ section within the CPB training site. Students can post or respond to questions. CBK staff, along with the assistance of the USEPA, the Cadmus Group and other subject matter experts can provide trainee support to benchmarking challenges. We can bring our lessons learned and experience back in to the site on a daily basis.

Video & Animation

Offering video and animation options to training makes it more visually appealing and easier to digest. The same voice over PowerPoint format can seem monotonous. The addition of new films and animations will give students a fresh feel to the curriculum.

External Partner Support

Community colleges, municipalities and NGO groups could benefit from the use of the training program, using the modules to assist their own classes and training. With the training program already financially sustainable, CBK could offer the use of the modules in an exportable format at little or no cost.

MARKETING APPROACHES

Events

We will select events to attend based off feedback from our channel market partners and where our target market will likely attend. At the events we will market and disseminate information about the credential and training program.



Surveys

A staff member of The Center for Building Knowledge (CBK) will create and disseminate surveys to prior participants and our target market group. The surveys will focus on advertising avenues and what features/information potential students would be looking for in the certification and training program.

Channel Partner Promotions

CBK will work with our channel market partners to send out email blasts, create newsletter articles and cosponsor webinars. Recently CBK hosted a webinar in partnership with Sustainable Jersey. The webinar began with Sustainable Jersey presenting different benchmarking opportunities within the state, followed by Lauren Zullo of NRDC providing attendees with information of what municipalities are doing on a national level and the City Energy Project. NJIT covered the credential and training program as a training resource for municipalities. The Center would like to offer more opportunities like this to our channel market partners, providing outreach and support to their members.

Paid Spots

Over the last two years of the project, CBK has seen a viable return on investment from the attendance and participation of large conferences hosted by our channel market partners. One of our market partners is the Association of Energy Engineers. CBK exhibited at their Globalcon event in 2015. The result of the event was immediate increased enrollment from the attendees - mostly comprised of engineers.

Media Relations

Marketing time spent on media outreach and development could be a huge success for the credential on a national level. Several engineers from Canada have now been awarded the credential as a result of it being mentioned in a national benchmarking article.

Partner Relations

Staff time maintaining the relationships with our key market partners, providing support to their members and convening focus groups we believe will be an important factor in retaining interest in the curriculum and credential renewal. We will stay in touch with our channel market partners on a regular basis keeping them engaged, but also adding qualifiable benefits to our partnership with the assistance of a partner liaison.

Events Convened

Early in 2015, a large conference was convened at CBEI focused on building benchmarking. The event was well attended in person and online, providing excellent exposure to the CPB, along with other DOE benchmarking tools. An annual National Benchmarking Summit at CBEI would keep CBEI as a lead in the area of benchmarking and demonstrate the long-term viability of the training program.



Exhibit at Events

NJIT believes with available marketing resources events with architects and engineers in attendance. Greenbuild, AIA National, World Energy Engineers Congress – would be great venues to showcase the credential and target potential users.

VI. Revenue Model

Outlined below are 4 scenarios, the revenue potential for NJIT, with our new credential price point of \$250.

Scenario	# Participants	Cost /Participant	Total Revenue	Hosting & Maintenance Cost**	Available Funds for Updating	Available Funds for Marketing	Update + Marketing FTE/Person-Months*
1	125	250	31,250	12,500	15,000	3,750	20.8% FTE/2.8 PM
2	250	250	62,500	25,000	25,000	12,500	41.7% FTE/5.0 PM
3	500	250	125,000	50,000	50,000	25,000	83.3% FTE/10.0 PM
4	1000	250	250,000	100,000	100,000	50,000	1.67 FTE/120.0 PM

* Assumption: Blended FTE rate of \$90,000/year fully loaded with fringe

**Fixed cost per participant: \$75 for technical hosting/maintenance plus \$25 for logistics/coordination

The continuing education credits make the credential attractive and can be reimbursable for most professionals by their employer. Referencing the charts in the strategy and implementation section, we have outlined the scenarios below and what we would be able to accomplish at the funding level.

1 provides enough funding to start to really engage our channel market partners through partner relations options. We can create new video modules, keeping the site looking vibrant and current.

2 is where we would like to be at least – and we feel that this is a viable target. As mentioned earlier, the market can bare \$250 dollars for a credential. With the additional marketing resources it is possible for us to have more than 250 professionals enroll in the credential per year.

3 and 4 provides NJIT with resources to convene meeting for our partners, like the national benchmarking summit; exhibit at events, add animations, and provide support to our channel market partners at no cost. We can make the site more robust and turn it in to a resource-training center for municipalities. In the 4 scenario, NJIT could put more than 1 staff member on the project annually.

Additional options we have are:

- Creating a licensing structure for municipalities, community college and institutions of higher learning. The training program would only be offered though these venues, at their rates. NJIT would be compensating for curriculum development, maintenance and technical support.
- Partner with the Cadmus Group, or another USEPA education contractor, to provide the education and piggy backing on to the funds USEPA is already awarding in their contract.
- Work with AEE or BCA to offer the credential as one of their offerings.
- Roll the training program in to a learning academy, hosted at NJIT, of USDOE tools, which would also include the Asset Score Tool.

VII. Final Activity Conclusion

NJIT believes our new price point of \$250 will ensure the long term sustainability of the Certificate of Proficiency in Benchmarking. The price point was changed early in 2016, without any push back about the new price. The price of the credential is still relatively low, in comparison to other professional credentials, keeping it affordable for municipal works and building operators to afford. Going forward, NJIT will make an effort to market both the Certificate of Proficiency in the Asset Score Tool, when we are marketing the benchmarking credential. We would like users to come to us as a training resource for both tools.





Certificate of Proficiency in Benchmarking Market Engagement Plan

The CBEI's marketing engagement plan for the Certificate of Proficiency in Benchmarking Program largely consisted of personal outreach and social media outreach.

Personal Outreach

The main method for personal outreach was email. The intent of email was to reach out to potential stakeholders on a personal level, and appeal to their desire to be proactive in energy efficiency. Therefore, the email is describing about the Certificate of Proficiency in Benchmarking Program briefly – the importance and the usefulness, and offering to meet to introduce the Certificate of Proficiency in Benchmarking Program further. The email also included some links to useful resources below

- EPA's Energy Star webpage
- Registration page for Certificate of Proficiency in Benchmarking Program
- PowerPoint presentation to introduce the Certificate of Proficiency in Benchmarking
- Survey to collect users' feedback
- Facebook page for Certificate of Proficiency in Benchmarking Program

A PowerPoint presentation and a survey were developed by our team at CBEI team for the more active communication with potential stakeholders. A PowerPoint presentation introduces Energy Star Portfolio Manager and Energy Star Certification to convince stakeholders why people have to learn the Certificate of Proficiency in Benchmarking. This presentation also includes the instructions on the online registration and credential exam. A short survey is designed to gauge the familiarity of Energy Star Portfolio Manager and Energy Star Certification. In addition, it helps to collect users' feedback on how successful and easy to use the Certificate of Proficiency in Benchmarking Program is.



Social Media Outreach

Social Media outreach has the intent to draw general audiences to the Certificate of Proficiency in Benchmarking Program. A Facebook page for the Certificate of Proficiency in Benchmarking Program was created. There has been regularly posted articles related to energy efficiency that would be of interest to the general public, aiming to use a familiar and friendly tone. The examples of best practice on managing projects with Energy Star Portfolio Manager were also introduced to show the real benefits. This Facebook link is embedded in the email which is sent to potential stake holders.

Other solution for the extent of outreach plan was the effective use of existing Energy Star related webpages as a means of PR. There are already existing webpages regarding Energy Star and Energy Star Certification in each local governments, public schools, communities, and so on. The introduction of the Certificate of Proficiency in Benchmarking Program was requested to be posted in those pages. This concludes the extent of our outreach plan.

Contact Potential Stakeholders

The stakeholders included businesses and individuals within our network that we could reach out to on a personal level and introduce the Certificate program.

- Architects, Developers, and Contractors
- Federal Agencies
- Local Governments and Schools
- Better Building Corporate Alliance Partners
- Energy star Partners
- Architecture Department in Universities includes Carnegie Mellon University



Appendix

- Email

Greetings,

The Consortium for Building Energy Innovation (CBEI) developed an online Certificate of Proficiency in Benchmarking, a training program for the Environmental Protection Agency's [Energy Star Portfolio Manager](#).

This training program provides a tutorial on how to navigate and use Energy Star Portfolio Manager, the number one tool used by municipalities and building owners to benchmark their building energy use. This online training program is approved by the Department of Energy.

The program consists of a tutorial available for free. It takes 4 hours and can be accomplished at any pace. If the participants wish to get credentials, they can enroll and take a quiz that covers what was explained in the videos. If successful, they will be awarded a certificate of proficiency in Benchmarking.

The online program can be found at this link - [Certificate of Proficiency in Benchmarking program](#).

If you are interested in learning more about this online training program and bring it to your organization, we would appreciate the opportunity to meet with you and discuss the training program and its benefits.

Sincerely,

Sasha Kerbel (akerbel@andrew.cmu.edu)

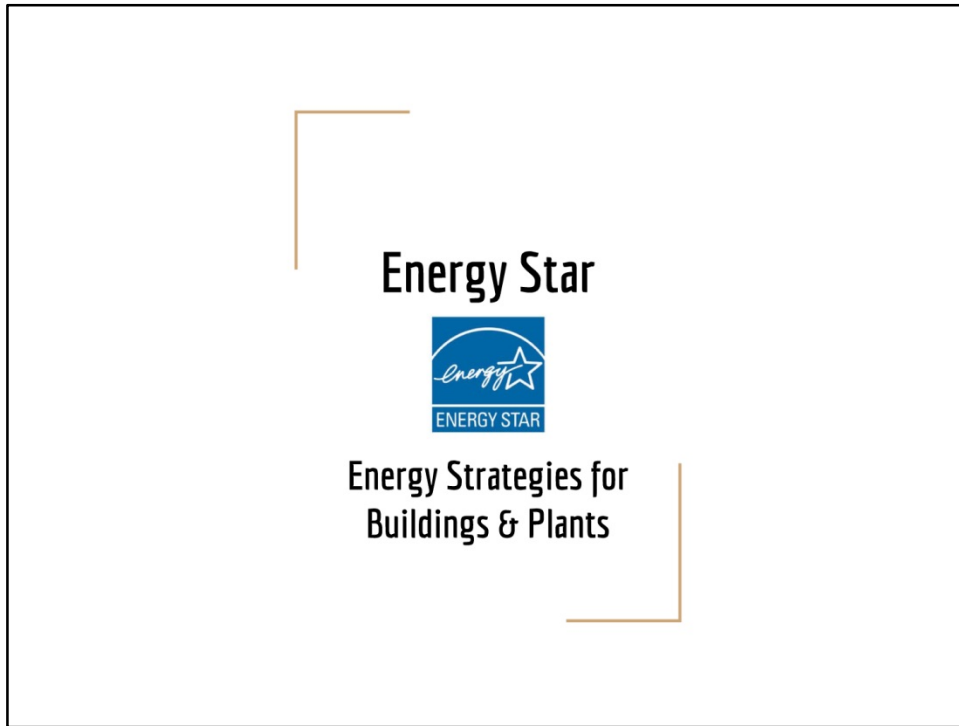
Bo Jun (bokyungj@andrew.cmu.edu)

Center for Building Performance and Diagnostics
Carnegie Mellon University

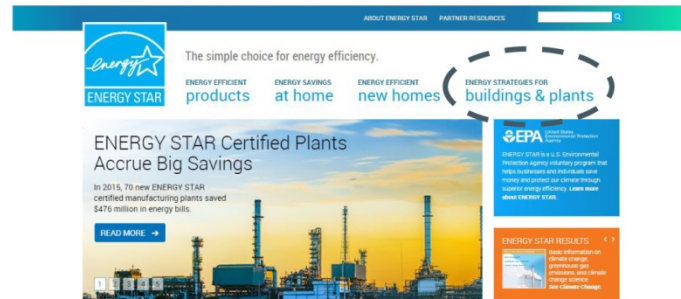


- [Learn about Energy Star Portfolio Manager and Energy Star Certification](#)
- [Register for the Certificate of Proficiency in Benchmarking program](#)
- [Explore Energy Star Portfolio Manager webpage](#)
- [Share your feedback - Survey](#)

- PowerPoint Presentation



ENERGY STAR is about more than products.



Since 1992, EPA has also worked with organizations to help them save money and reduce greenhouse gas emissions by making their **buildings and plants** more energy efficient.¹⁾

What is the Energy Star Portfolio Manager?

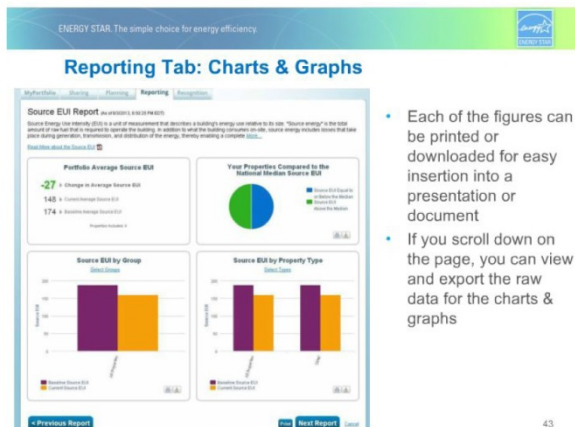


“An online tool you can use to **measure and track energy and water consumption, as well as greenhouse gas emissions.**”

- Benchmark the energy performance of your buildings in a secure online environment
- Evaluate and improve your energy use thanks to easily aggregated data

Energy Star Portfolio Manager in Action

- Input 1 : Address, Building Use, Gross Area, Occupancy, Operating Hours
- Input 2: Energy & Water Bill
- View Aggregated Data: Source EUI, Energy Star Score

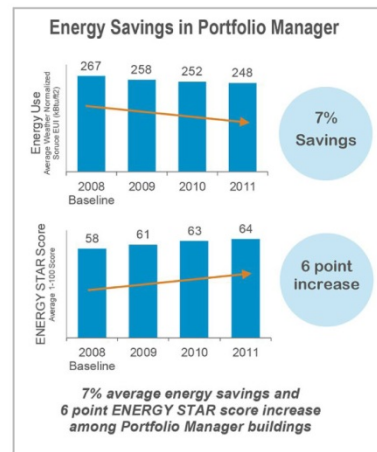


- Each of the figures can be printed or downloaded for easy insertion into a presentation or document
- If you scroll down on the page, you can view and export the raw data for the charts & graphs



How the Portfolio Manager Helps You Save

- Manage energy and water consumption for any building
- Get a 1 – 100 **ENERGY STAR score** for eligible buildings
- Measure your carbon footprint
- Set investment priorities
- **Verify and track savings**
- Share and report performance
- Get recognition



What does your ENERGY STAR score mean?

- A score of 50 is the median
Below 50 means it's performing worse than 50 percent of similar buildings nationwide
- a score of **75 or higher** may be eligible for **ENERGY STAR certification**
- **ENERGY STAR certification** is renewed annually and it helps asset value increased with no cost.



Energy Star Certification is like an Annual Checkup for Buildings



	Human	Building
Examiner	Doctor	PE or Architect
Measure	Height Weight	Gross Area Energy & Water Use
Result	Body Mass Index (BMI)	Energy Use Intensity (EUI) GHG Emission
Purpose	to measure overweight and obesity	to benchmark the performance of building

Online Training Resources

for

Energy Star Portfolio Manager

What is the Certificate of Proficiency in Benchmarking

CERTIFICATE OF PROFICIENCY IN BENCHMARKING*

- Online training program and credential exam for Energy Star Portfolio Manager tool
- Train service providers, building operators and other interested professionals how to benchmark their buildings, assure the quality of their data and measure/monitor their progress
- Free for use, after registration

How to Register the Certificate of Proficiency in Benchmarking

- Click [Register the Certificate of Proficiency in Benchmarking program](http://online.njit.edu/cbk/) or visit <http://online.njit.edu/cbk/>
- Click 'Certificate of Proficiency in Benchmarking: Training Program'

CERTIFICATE OF PROFICIENCY IN BENCHMARKING®

The Certificate of Proficiency in Benchmarking® is an online-based program that recognizes successful completion of training and testing in minimum competencies in the use of the U.S. Environmental Protection Agency's ENERGY STAR Portfolio Manager® tool.

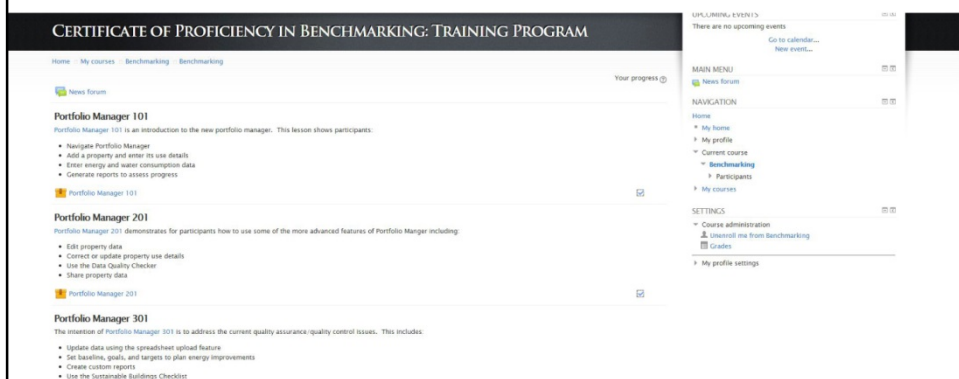
Across the U.S. there is growing support for benchmarking building energy and water consumption, driven both by local legislation and voluntary interest in understanding and improving building performance. The Certificate of Proficiency in Benchmarking® offers building industry professionals the opportunity to learn how to collect energy and water use information and successfully benchmark most types of buildings.



This certification program will train service providers, building operators and other interested professionals how to benchmark their building, assure the quality of their data and measure/monitor their progress. This training program is free for use, after registration.

How to Register the Certificate of Proficiency in Benchmarking

- Click **'Create new account'** and fill out the new account form
- A confirm email will be sent to you.



The screenshot shows a web interface for the 'CERTIFICATE OF PROFICIENCY IN BENCHMARKING: TRAINING PROGRAM'. The main content area lists three modules: 'Portfolio Manager 101', 'Portfolio Manager 201', and 'Portfolio Manager 301'. Each module includes a brief description and a list of key features or tasks. For example, 'Portfolio Manager 101' includes tasks like 'Navigate Portfolio Manager', 'Add a property and enter its use details', 'Enter energy and water consumption data', and 'Generate reports to assess progress'. A right-hand sidebar contains navigation and settings options, including 'Home', 'My profile', 'Current course', 'Participants', 'My courses', 'Course administration', 'Unenroll me from Benchmarking', 'Grades', and 'My profile settings'.

Why Invest in this Certificate?

- Become more proficient in the Energy Star Portfolio Manager
- Become more competent and knowledgeable in energy benchmarking overall
- Accurate benchmarking - accurate reflection of energy use
 - Beneficial to you, and other organizations around you

Overview of Training Program

- 4 online tutorials
 - Introduce Energy Star Portfolio Interface
 - How to input building energy data correctly & efficiently
 - How to edit & share data
 - Walkthrough of actually entering own data

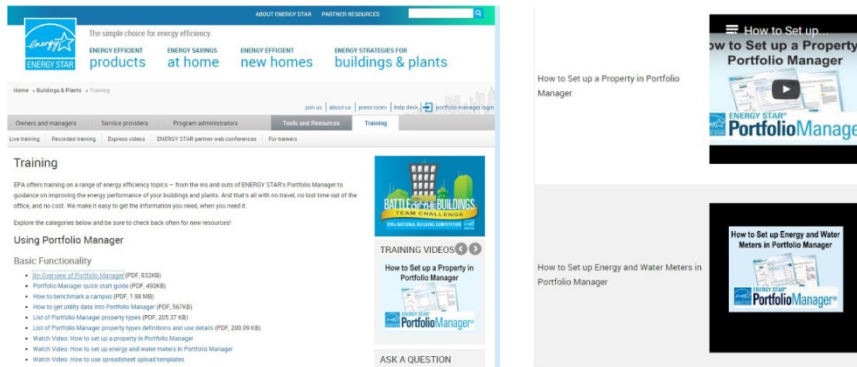
Overview of Credential Exam Program

- Final Exam
 - To qualify, complete all 4 tutorials within the last 12 months
 - Three exam attempts available 12 month period.
 - \$125 fee for 2-year certification period
 - Complete the certificate before April 30 and CBEI will refund you!

More Online Training Resources are available

Various learning resources: PDFs, Videos, Web Conferences

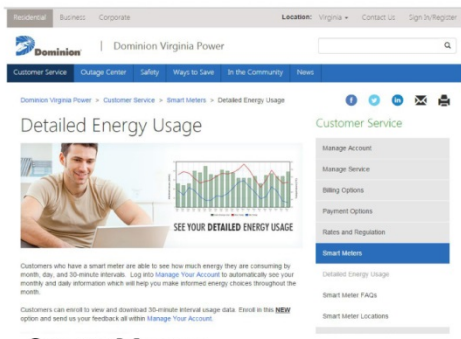
- <https://www.energystar.gov/buildings/training>



The screenshot shows the Energy Star Portfolio Manager training page. It features a navigation menu with categories like 'ENERGY EFFICIENT products', 'ENERGY SAVINGS at home', 'ENERGY EFFICIENT new homes', and 'ENERGY STRATEGIES FOR buildings & plants'. The 'Training' section is highlighted, and it lists various resources including PDFs and videos. A 'TRAINING VIDEOS' section is also visible, with a video thumbnail titled 'How to Set up a Property in Portfolio Manager'.

The future of
Energy Star
Portfolio
Manager

Measuring & Tracking Energy in Real time

[Residential](#) [Business](#) [Corporate](#) [LOGGED IN: Virginia](#) [Contact Us](#) [Sign In/Register](#)
 Dominion | Dominion Virginia Power
[Customer Service](#) [Outage Center](#) [Safety](#) [Ways to Save](#) [In the Community](#) [News](#)
 Dominion Virginia Power > [Customer Service](#) > [Smart Meters](#) > [Detailed Energy Usage](#)

Detailed Energy Usage

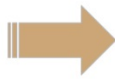
SEE YOUR DETAILED ENERGY USAGE

Customers who have a smart meter are able to see how much energy they are consuming by month, day, and 30-minute intervals. Log into [Manage Your Account](#) to automatically see your monthly and daily information which will help you make informed energy choices throughout the month.

Customers can elect to view and download 30-minute interval usage data. Enroll in this **NEW** option and send us your feedback at [within Manage Your Account](#).

Customer Service

- Manage Account
- Manage Service
- Billing Options
- Payment Options
- Rates and Regulation
- Smart Meters**
- Detailed Energy Usage
- Smart Meter FAQs
- Smart Meter Locations



Smart Meters 6)



**CONSORTIUM for
BUILDING ENERGY
INNOVATION**

Develop User Friendly Reports

the auto-generated report in
Energy Star Portfolio
Manager

vs

the re-generated report by
one of energy consulting
company⁹⁾

Summary Report

NOT FOR USE WHEN APPLYING FOR THE ENERGY STAR

**Statement of Energy Performance
FACILITY SUMMARY REPORT**
Sample Facility

For 12 months Period Ending: February 29, 2007
Date Reported: 02/11/2007

This document was generated using EPA's Portfolio Manager system. All information shown is based on data provided by the Portfolio Manager account holder. Consistent with the use of the "EPA" domain, Portfolio Manager cannot be held responsible for errors or omissions in this report. Please contact the account holder for more information. Verify that the underlying data is accurate. Some data may be left intentionally as "N/A" pending further data is provided.

Site Address:
400 Appleton, VA 22021

Site EUI: 100.00

Facility Space Use Summary

Facility Name	Number of Reported Buildings	Minimum Number of Floors	Number of Floors
Sample Facility	100	4	7

Energy Performance Comparison

Category	Current	Target	Delta	Relative Change	Relative \$/sq ft
Energy Performance Index	100	100	0	0%	0
Energy Performance Index	1.16	1.00	0.16	16.00%	167.76
Electric	10.84	10.00	0.84	8.40%	476.80
Gas	0.00	0.00	0.00	0.00%	0.00
Water	0.00	0.00	0.00	0.00%	0.00

Energy Usage Report | 2 WPC | 225 Liberty Street, New York, NY 10021 | March 4, 2011

Owner: Building Owner
Year Built: 1997
Square Footage: 6,000 sq ft
Analysis Period: 12/1/2008 - 12/1/2009

Annual Site Energy Consumption

How You Compare to Your District

Your Building's Score: **94**

Average Score for Your District: **64**

Annual Carbon Emissions

Total Carbon Footprint: **27,109,373 lbs/year**

The site building energy is converted to site emissions and then to global warming potential (GWP) to allow for comparison with other buildings. Quality of carbon emissions sources, the environmental impact of the site energy used and consider the source fuel for electricity.

Total Energy By Use

142,000 kWh (64,000 kWh)

Total Annual Energy Cost

\$3,100 (Total Cost)