

Environmental Challenge

Tracking Water and Energy Use in Portfolio Manager & the C&W EC Challenge



Training Webinar
Feb4th, 2010



Presentation Team

- EPA ENERGY STAR
 - Alyssa Quarforth, Program Manager, Commercial Property Markets
 - Andrew Schulte, ICF International in support of ENERGY STAR
- C&W Client Solutions
 - Eleni Reed, Director, Sustainability Strategies



Agenda

- Training Objectives
- Background (C&W)
 - ENERGY STAR Program
 - C&W Energy Efficiency & Water Efficiency Policies
 - C&W *Environmental Challenge* requirements
- Benchmarking 201 (EPA ENERGY STAR)
 - Sharing data with the C&W Master Account
 - Tracking metrics for *Environmental Challenge*
 - Frequently asked questions on benchmarking and Portfolio Manager



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Training Objectives

- Review C&W procedures for tracking energy and water consumption using Portfolio Manager in support of *Environmental Challenge* requirements.
- Address common issues in benchmarking energy and water use using ENERGY STAR's Portfolio Manager tool



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Background



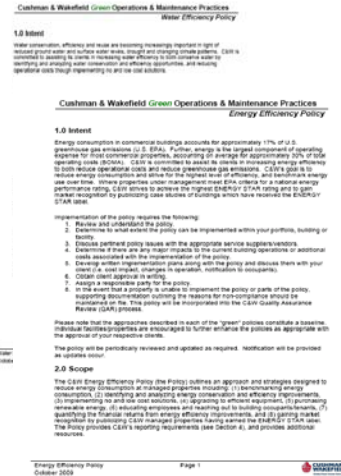
C&W is an EPA ENERGY STAR Partner

- C&W became an ENERGY STAR Partner in 1999
- ENERGY STAR is a voluntary partnership program:
 - Focused on climate protection
 - Provides strategic approach to energy management, promoting energy efficient practices
 - Helps organizations save money and protect the environment
- C&W property management and building operations teams use Portfolio Manager to measure and track energy and water use
 - 362 properties under management have shared their individual PM account info with the C&W Corporate Master Account



C&W Energy & Water Efficiency Policies

- C&W's *Energy & Water Efficiency Policies* are part of of nine C&W GPPs incorporated in Chapter 11 of C&W's Property Operations Manual.
- The Policies outline approach and strategies designed to reduce energy and water consumption at managed properties
- Requires reporting of energy and water consumption
- Reporting tool is EPA ENERGY STAR Portfolio Manager



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Energy & Water Use Reporting is Mandatory

- Mandatory reporting requirements pursuant to C&W Green Practice Policies (Chapter 11 of C&W Property Operations Manual)
 - Energy Efficiency Policy
 - ➔ Track energy use using Portfolio Manager
 - Set baseline in Portfolio Manager to 2008
 - Follow C&W guidelines outlined in *C&W's EPA ENERGY STAR Portfolio Manager Workbook*
 - Water Efficiency Policy
 - ➔ Track water (indoor and outdoor) use in Portfolio Manager tool
 - Set baseline in Portfolio Manager to 2008
 - Follow C&W guidelines outlined in *C&W's EPA ENERGY STAR Portfolio Manager Workbook*
 - Solid Waste Management
 - Track municipal solid waste and recycled waste in EPA WasteWise Re-TRAC
 - Follow C&W guidelines outlined in *C&W's EPA WasteWise Re-TRAC Workbook*.



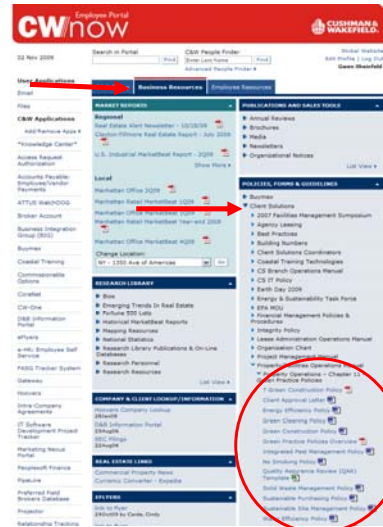
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Accessing C&W GPPs (Option 1)

Two options:

- CW//now; or
- Fusion Portal

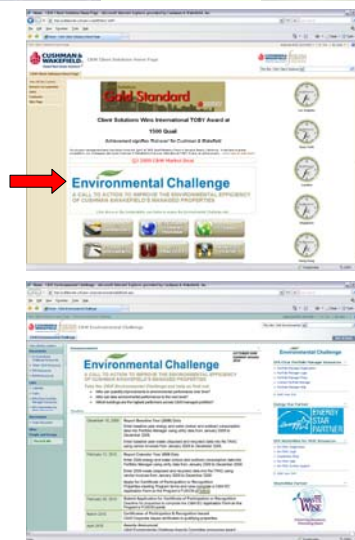


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Accessing C&W GPPs (Option 2)

- *Environmental Challenge* FUSION portal
 - Existing FUSION users can navigate to the *Environmental Challenge* site from the CS Homepage
 - If you do not have access to FUSION, send an email to fusion@cushwake.com to request access with your name, email address, and office location and you will be sent a user ID and password to access the site



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C&W Environmental Challenge

[illegible]

WHAT IS THE C&W ENVIRONMENTAL CHALLENGE?

Cushman & Wakefield (C&W) challenges its portfolio of managed properties in the US to reduce energy and water consumption, and waste disposal by 10% by 2012, compared to a 2008 baseline.

The *Challenge* supports C&W's commitment to promote the efficient use of natural resources and the reduction of greenhouse gas emissions associated with building operations as outlined in the C&W-EPA Memorandum of Understanding (MoU) executed in December 2008.

About the *Challenge*

- A call to action to improve the environmental efficiency of C&W's managed properties:
 - Reduce energy consumption, water consumption and waste disposal by 10% by 2012 compared to a 2008 baseline
- Participating properties must report monthly energy, water and waste data
- Environmental achievements recognized through a C&W recognition & awards program

Why Participate?

- Improve your bottom line
 - Reduce operating expenses
 - Potential for increased net operating income and property asset value
- Do your part to address climate change
 - Commercial buildings generate about 17% of total greenhouse gas emissions
 - Energy efficiency is the single largest way for a building to reduce its "carbon footprint"
 - Conserving raw materials reduces emissions
- Be recognized for your achievements
 - Receive C&W recognition for participation in the Challenge



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How do I Participate?

- Benchmark energy use and water consumption
 - Tool: Portfolio Manager, EPA ENERGY STAR's free online benchmarking tool
- Report waste disposal
 - Tool: Re-TRAC, EPA WasteWise's free online tool
- Share data with the C&W corporate accounts in Portfolio Manager and Re-TRAC
 - Tool: C&W Corporate Master Accounts
- Utilize strategies in C&W's Green Practice Policies (GPPs) to make improvements over the Challenge period
 - Tool: C&W's GPPs



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EC - Terms & Rules

- Report in EPA ENERGY STAR Portfolio Manager
 - Track energy consumption and water use (indoor and outdoor)
 - Report 24 consecutive months: January 2008 - December 2009
- Report in EPA WasteWise Re-TRAC
 - Track municipal solid waste and recycled waste
 - Report 24 consecutive months: January 2008 - December 2009

C&W Resources

- C&W's EPA ENERGY STAR Portfolio Manager Workbook
 - Available on CW//now and on the EC Fusion Portal

Cushman & Wakefield's EPA ENERGY STAR Portfolio Manager Workbook



C&W Procedures for Tracking Energy and Water Consumption



Updated October 2009



EPA ENERGY STAR Resources

- ENERGY STAR benchmarking trainings
www.energystar.gov/training
- Benchmarking Starter Kit
http://www.energystar.gov/index.cfm?c=comm_real_estate.bus_comm_realestate_bm_starter_kit
- Step by Step Quick Reference Guide
http://www.energystar.gov/ia/business/comm_real_estate/downloads/quick_ref_guide.pdf
- How to get started with Automated Benchmarking Services
http://www.energystar.gov/ia/partners/spp_res/LFES_Commercial_Real_Estate.pdf
- Building Upgrade Manual
http://www.energystar.gov/index.cfm?c=business.bus_upgrade_manual



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Benchmarking 201 With ENERGY STAR



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Benchmarking in Portfolio Manager: Basic Principles



- All buildings should be benchmarking, even if they cannot receive a 1-to-100 score
- Enter energy consumption on a monthly basis, as you receive utility invoices
- Ensure that you are capturing *all* on-site energy consumption (even renewables, if applicable)
- Focus first on accurate data entry;
- Then evaluate your property's performance to see if you are at or near a recognition level

Going Live to Portfolio Manager



- Sharing Data with the C&W Master Account
- Tracking Metrics for Environmental Challenge
- Frequently Asked Questions on Benchmarking and Portfolio Manager

Sharing Your Property with the C&W Master Account



Facility Performance - All facilities have 1 selected Performance Year

Select View: [ENERGY Environmental Challenge](#) [Compare](#) [Details](#)

12 Month Ending	Estimated Energy Project Building Use	Current Building EUI (kBtu)	Current Overall Normalized Source Energy Intensity (kBtu/sq ft)	Change from Baseline Adjusted Energy Use (%)	Total Indoor and Outdoor Water Use (gallons)	Change from Baseline Total Water Use (%)	Change from Baseline Carbon Emissions (tons CO2e)
December 2017	12/31/2017	50	50	50	50	50	50
August 2018	8/31/2018	51	100.1	100.1	5,400.0	11.11	100.00
Change							

Facility Details

Facility Name	Facility Type	Floor Area (sq ft)	% Floor Area	Notes
123456789	Office	50,000	100	
123456789	Office	40,000	80	
123456789	Office	20,000	40	
123456789	Office	10,000	20	Facility operating hours is much lower than normal.
Total		100,000	100	

General Facility Administration
[Track](#) Energy Performance Improvements
[Delete](#) this Facility from Portfolio Manager
[Contact](#) us

Sharing Data
[Add](#) user to share this Facility
[Modify](#) list of users
[Transfer](#) Facility to another user
[View](#) entire Access List for this Facility

Applying for the ENERGY STAR
[Apply](#) for the ENERGY STAR
[View](#) status of ENERGY STAR Applications

Building Profiles
 A building Profile can be created when an ENERGY STAR label application is submitted



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Sharing Your Property with the C&W Master Account, cont'd



Option A:
 Manually Enter Portfolio Manager Username:
 C&WCORPORATEMASTERACCOUNT

Share Your Facilities with a User or Master Account

Users with whom you share facilities are able to see your name and e-mail address on their Facility Summary page for that shared facility. Users also have the option to select your name and email address to appear in their custom views. Select Cancel if you do not wish to share this facility.

Select the Portfolio Manager user account to which you want to grant access or modify existing access rights.

Select user from my current access list: [Select User](#)

- OR -

Enter Portfolio Manager Username:

- OR -

Select a Portfolio Manager Master Account: [Cushman & Wakefield - C&WCORPORATEMASTERACCOUNT](#) [Learn more about Master Accounts](#)

[CANCEL](#) [CONTINUE](#)

Option B:
 Choose C&W Master Account from the drop-down menu:
 "Cushman & Wakefield - C&WCORPORATEMASTERACCOUNT"



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Sharing Your Property with the C&W Master Account, cont'd



PORTFOLIO MANAGER

ACCOUNT INFORMATION CONTACTS FREQUENTLY ASKED QUESTIONS CONTACT US HELP LOGOUT

Home > My Portfolio > Average Office Building Multiple Spaces > Access Rights

Access Rights: Eleni Reed

Please identify the set of rights to be assigned to Eleni Reed by selecting one of the following Access Roles:

Access Role	Access Rights
<input checked="" type="radio"/> Facility/Profile Editor	(1) Edit all Data for this Facility; (2) Generate a Statement of Energy Performance; (3) Submit an ENERGY STAR Building Application; (4) Create/Edit a Building Profile
<input type="radio"/> Facility Editor	(1) Edit all Data for this Facility; (2) Generate a Statement of Energy Performance; (3) Submit an ENERGY STAR Building Application; May NOT create/edit a Building Profile
<input type="radio"/> Profile Editor	(1) Create/Edit a Building Profile; May NOT edit any other data for this facility; generate a Statement of Energy Performance or submit an ENERGY STAR Building Application
<input type="radio"/> Read Only	Read Access only; May NOT edit any data for this facility; generate a Statement of Energy Performance; submit an ENERGY STAR Building Application or create/edit a Building Profile

Optional Rights

Can this user set a baseline for this facility? ☒ Yes ☐ No
(Note: There is only one baseline date per facility.)

Can Eleni Reed provide access to this facility's data with other users? ☒ Yes ☐ No
(Note: A user cannot delegate any access role greater than their own. See table above. All users who are given this right will be able to assign this right to other users.)

Can Eleni Reed delete this facility from your account? ☒ Yes ☐ No
(Note: This right is reserved only for Facility/Profile Editors or Facility Editors.)

Specify one group from this User's account in which to place the shared facilities. Learn more about sharing into groups.

Main Portfolio
Main Portfolio
Facilities Management
Investor Services

Account for this user (available for Profile Editor Access Roles only):

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Setting a Baseline: Step 1



Facility Performance **Set Baseline Periods** | Set Energy Performance Target

Select View: Summary Energy Use Create View Edit View

12 Months Ending	Current Rating (1-100)	Current Site Energy Intensity (kBtu/Sq. Ft.)	Current Source Energy Intensity (kBtu/Sq. Ft.)	Change from Baseline: Energy Use Intensity (kBtu/Sq. Ft.)	Change from Baseline: Adjusted Energy Use Intensity (kBtu/Sq. Ft.)
September 2009	96	28.7	95.8	-15.5	-33.8
Select Date					
Change					



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Setting a Baseline: Step 2



Set Baseline Periods

Set Energy Baseline

Baseline Period: 12/31/2005
Baseline Rating: 88

- ☒ Set Baseline Period (12 Months Ending)
January 2008
- ☐ Let Portfolio Manager automatically determine the Baseline Period

Set Water Baseline

Baseline Period: N/A

- ☒ Set Baseline Period (12 Months Ending)
January 2008
- ☐ Let Portfolio Manager automatically determine the Baseline Period



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Creating a Custom View: Step 1



Facility Performance | Set Baseline Periods | **Set Energy Performance Target**

Select View: Summary Energy Use **Create View** | All Views

12 Months Ending	Current Rating (1-100)	Current Site Energy Intensity (kBtu/Sq. Ft.)	Current Source Energy Intensity (kBtu/Sq. Ft.)	Change from Baseline: Energy Use Intensity (kBtu/Sq. Ft.)	Change from Baseline: Adjusted Energy Use Intensity (kBtu/Sq. Ft.)
September 2009	96	28.7	95.8	-15.5	-33.8
Select Date					
Change					



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Creating a Custom View: Step 2



Selections

- 1 - Baseline Energy Period Ending Date
- 2 - Current Rating (1-100)
- 3 - Current Weather Normalized Source Energy Intensity (kBtu/Sq. Ft.)
- 4 - Change from Baseline: Adjusted Energy Use (%)
- 5 - Total Indoor and Outdoor Water Use (kGal)
- 6 - Change from Baseline: Total Water Use (%)
- 7 - Current Total GHG Emissions (MtCO₂e)

Create New View

Number of Facilities to display on each page:
10, 20, 50, 100, 200, 500, 1000, 2000, 5000, 10000

To create a custom view of your Facilities in Fusion, select up to 7 columns from the list below. Use "Preferred Column Order" to set the order in which they will display in the View.

View Name: Set this View as My Portfolio Default: ☐

Preferred Column Order	Facility Data	Preferred Column Order	Facility Data
1	ENERGY STAR Rating	1	Water
2	Baseline Rating (1-100)	2	Change from Baseline: Indoor Water Use (kGal)
3	Current Rating (1-100)	3	Change from Baseline: Indoor Water Use (%)
4	Target Rating (1-100)	4	Change from Baseline: Indoor Water Use Intensity (kBtu/Sq. Ft.)
5	Period Ending Date	5	Change from Baseline: Outdoor Water Use (kGal)
6	Baseline Energy Period Ending Date	6	Change from Baseline: Outdoor Water Use (%)
7	Baseline Water Period Ending Date	7	Change from Baseline: Total Water Use (kGal)
8	Current Energy Period Ending Date	8	Change from Baseline: Total Water Use (%)
9	Current Water Period Ending Date	9	Indoor Water Cost (\$/US Dollars (\$))
10	Use Energy	10	Indoor Water Use (kGal)
11	Baseline Site Electric Use (kWh)	11	Indoor Water Use per Sq. Ft. (kGal)
12	Baseline Site Energy Intensity (kBtu/Sq. Ft.)	12	Outdoor Water Cost (\$/US Dollars (\$))
13	Baseline Site Natural Gas Use (therms)	13	Outdoor Water Use (kGal)
14	Baseline Total Site Energy Use (kBtu)	14	Outdoor Water Use Intensity (kBtu/Sq. Ft.)
15	Current Site Electric Use (kWh)	15	Total Indoor and Outdoor Water Cost (\$/US Dollars (\$))
16	Current Site Energy Use (kBtu)	16	Total Indoor and Outdoor Water Use (kGal)

View Name
C&W Environmental Challenge



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Using the "C&W Environmental Challenge" View



Facility Performance | Set Baseline Periods | Set Energy Performance Target

Select View: C&W Environmental Challenge | Compare Views | Edit View

12 Months Ending	Baseline Energy Period Ending Date	Current Rating (1-100)	Current Weather Normalized Source Energy Intensity (kBtu/Sq. Ft.)	Change from Baseline: Adjusted Energy Use (%)	Total Indoor and Outdoor Water Use (kGal)	Change from Baseline: Total Water Use (%)	Change from Baseline: GHG Emissions (MtCO ₂ e)
December 2008	12/31/2008	70	212.0	0.0	7,200.0	0.00	0.00
December 2009	12/31/2008	81	180.1	15.4	6,400.0	-11.11	-145.48
Change		11	-31.9	15.4	-800.0	-11.11	-145.48

REFRESH VIEW

- 1) Set comparison periods: December 2008 vs. December 2009
- 2) Determine "Change from Baseline: Adjusted Energy Use (%)"
- 3) Determine "Change from Baseline: Total Water Use (%)"
- 4) Enter this information into the C&W EC Application Form on the Fusion Portal



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Frequently Asked Questions



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Why am I getting a rating of N/A?



Facility Performance | Set Baseline Periods | Set Energy Performance Target

Select View: C&W Environmental Challenge | [Compare Views](#) | [Get Values](#)

12 Months Ending	Baseline Energy Period Ending Date	Current Rating (1-100)	Current Weather Normalized Source Energy Intensity (kBtu/Sq. Ft.)	Change from Baseline: Adjusted Energy Use (%)	Total Indoor and Outdoor Water Use (kGal)	Change from Baseline: Total Water Use (%)	Change from Baseline: GHG Emissions (MtcO2e)
December 2007	12/31/2008	N/A	N/A	N/A	N/A	N/A	N/A
August 2009	12/31/2008	81	180.1	-15.4	6,400.0	-11.11	-145.48
Change				N/A			N/A

REFRESH VIEW

Unable to calculate Current Rating (1-100) for Average Office Building Multiple Spaces (Facility ID: 1274698) due to the following reasons:
Less than One Full Year of Energy Meter Data

Clicking on the "N/A" will display a troubleshooting message

For a complete list of potential issues, see

https://www.energystar.gov/istar/pmpam/help/Warning_Messages.htm



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Why am I getting a rating of “1”?



- Could be valid; however...
- ...check that your units are correct – especially for natural gas and district steam
- Portfolio Manager uses “k” to mean “thousand” and “M” to mean “million” (e.g., kBtu vs. MBtu)
- Many utilities use “M” to mean “thousand” and “MM” to mean million” (e.g., MCF vs. MMCF)
- Ensure you are using the correct unit – or else PM could be reading your energy usage as being high by a factor of 1,000!



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How do I account for indoor and outdoor water if they are tracked on the same meter?



- When setting up your water meter, you can check multiple boxes to indicate what kind of consumption is being measured
- The “Change from Baseline: Total Water Use (%)” metric will account for all indoor and outdoor water consumption – whether it is on one meter or multiple meters

Add Water Meter

Meter Name:

Select the type of water use:

☒ Indoor

☒ Outdoor

Or

☐ Wastewater/Sewer

Units:

Add this meter to Total Facility Water Use?

☒ Yes, calculate this total water use by including this meter

☐ No, adding this meter to this total water use will inflate the actual value

Facility Performance [Set Baseline Period](#) | [Set Energy Performance Target](#)

Select View: [C&W Environmental Challenge](#) | [Create View](#) | [Edit View](#)

12 Months Ending	Baseline Energy Period Ending Date	Current Rating (1-100)	Current Weather Normalized Source Energy Intensity (kBtu/Sq. Ft.)	Change from Baseline: Adjusted Energy Use (%)	Total Indoor and Outdoor Water Use (kGal)	Change from Baseline: Total Water Use (%)	Change from Baseline: GHG Emissions (MtcO ₂ e)
December 2008	12/31/2008	70	212.0	0.0	7,200.0	0.00	0.00
August 2009	12/31/2008	81	180.1	-15.4	6,400.0	-11.11	-145.48

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What if our tenants are billed directly from the utility?



- Talk to your tenants directly
 - ENERGY STAR [Tenant Benefits Letter](#)
 - ENERGY STAR [Utility Release Authorization](#)
- Contact your utility account representative to see what is needed to obtain aggregate billing data for your property (note: be clear that you are *not* requesting individual tenants' consumption)
- California utilities should be able to provide data per AB 1103
- ComEd customers (Chicago) may be able to use the whole building [Energy Usage Data](#) tool



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How do I account for vacant space?



- Offices must input vacant space as a **separate line item** under "Space Use"
- Identify the relevant amount of square footage, using **0** PCs, **0** workers, and **0** operating hours
- EPA analysis determined that this approach allows buildings with vacant space to receive an accurate, rigorous, nationally comparable score, as long as occupancy is 50% or higher
- See new [FAQ](#) on the ENERGY STAR Web site for more information



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Environmental Challenge Checklist

- Energy and water consumption reporting:
 - Benchmark building energy and water consumption in Portfolio Manager following the procedures outlined in *C&W's EPA ENERGY STAR Portfolio Manager Workbook*.
 - Energy and water (indoor and outdoor) use must be tracked for 24 consecutive months; beginning with the building's January 2008 billing cycle and ending in December 2009. Use must be entered for each month using utility bills.
 - Benchmark all fuels and enter indoor and outdoor water consumption used in the operation of their buildings.
 - All energy and water meters for a building must be entered into Portfolio Manager.
 - The baseline year must be set to 2008 for both energy and water consumption.
 - Individual Portfolio Manager accounts must be shared with the appropriate group (either facility management or investor services) in the C&W Corporate Master account, and with the BOMA International master account.



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Environmental Challenge Next Steps

- **February 12, 2010**
 - **Deadline for Reporting 2008 and 2009 Data in Portfolio Manager and Re-TRAC**
 - **Apply for Certificate of Participation or Recognition**
 - Properties meeting Program terms and rules complete a *C&W Environmental Challenge (EC) Application Form* posted on the Program's FUSION portal.
- **February 26, 2010**
 - **Deadline for Completing an Application for Certificate of Participation or Recognition (for properties meeting Program terms and rules)**



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Environmental Challenge Timeline

December 18, 2009	Report Baseline Year (2008) Data Enter baseline year energy and water (indoor and outdoor) consumption data into Portfolio Manager using utility data from January 2008 to December 2008. Enter baseline year waste (disposed and recycled) data into Re-TRAC using vendor invoices from January 2008 to December 2008.
February 12, 2010	Report Calendar Year 2009 Data Enter 2009 energy and water (indoor and outdoor) consumption data into Portfolio Manager using utility data from January 2009 to December 2009. Enter 2009 waste (disposed and recycled) data into Re-TRAC using vendor invoices from January 2009 to December 2009. Apply for Certificate of Participation or Recognition Properties meeting Program terms and rules complete a <i>C&WEC Application Form</i> on the Program's FUSION portal.
February 26, 2010	Submit Application for Certificate of Participation or Recognition Deadline for properties to complete the <i>C&WEC Application Form</i> on the Program's FUSION portal.
March 2010	Certificates of Participation & Recognition Issued C&W Corporate issues certificates to qualifying properties.
April 2010	Awards Announced <i>C&W Environmental Challenge Awards Committee</i> announces award recipients. Ceremonies held at properties receiving an award in conjunction with Earth Day events.
May 2010	Key dates for 2010 and 2011 announced.



Questions



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