

# 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



## 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





# 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

**Cushman & Wakefield Green Operations & Maintenance Practices**  
**Water Efficiency Policy**

**1.0 Intent**

Water conservation, efficiency and reuse are becoming increasingly important in light of reduced ground water and surface water levels, drought and energy conservation policies. C&W is committed to assisting its clients in reducing water efficiency in their commercial water to lowering and possibly water conservation and efficiency opportunities and reducing operational costs through implementing it and to the best solution.

**Cushman & Wakefield Green Operations & Maintenance Practices**  
**Energy Efficiency Policy**

**1.0 Intent**

Energy consumption in commercial buildings accounts for approximately 17% of U.S. greenhouse gas emissions (U.S. EPA). Further, energy is the largest component of operating expenses for most commercial properties, accounting on average for approximately 20% of total operating costs (DOC). C&W is committed to assist its clients in reducing energy efficiency to both reduce operational costs and reduce greenhouse gas emissions. C&W's goal is to reduce energy consumption and cost for the highest level of energy efficiency. To improve performance ratings, C&W strives to achieve the highest ENERGY STAR rating and to gain market recognition by promoting case studies of savings which have received the ENERGY STAR label.

Implementation of the policy requires the following:

1. Review and understand the policy, use as appropriate within your portfolio, building or facility.
2. Review and understand the policy, use as appropriate within your portfolio, building or facility.
3. Identify pertinent policy issues with the appropriate service suggestions/vendors.
4. Determine if there are any major impacts to the current building operations or seasonal costs associated with the implementation of the policy.
5. Assign client responsibility (part along with the policy and discuss them with your client (i.e. cost impact, changes in operations, contribution to occupants).
6. Obtain client approval to ending.
7. Assign a responsible party for the policy.
8. Reporting documentation (including the reasons for non-compliance) which is maintained on file. This policy will be incorporated into the C&W Quality Assurance Review (QAR) process.

Please note that the approaches described in each of the "green" policies constitute a baseline. Individual facilities/properties are encouraged to further enhance the policies as appropriate with the approval of your respective clients.

The policy will be periodically reviewed and updated as required. Notification will be provided as a written notice.

**2.0 Scope**

The C&W Energy Efficiency Policy (the Policy) defines an approach and strategies designed to reduce energy consumption in managed properties including: (1) benchmarking energy consumption; (2) identifying and analyzing energy consumption and efficiency improvements; (3) implementing an annual cost reduction; (4) upgrading to efficient equipment; (5) promoting renewable energy; (6) measuring emissions and reporting on building performance; (7) quantifying the financial returns from energy efficiency improvements; and (8) gaining market recognition by publishing C&W managed properties having earned the ENERGY STAR label. The Policy provides C&W's reporting requirements (see Section 4), and provides additional resources.



# 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*.



## Accessing C&W GPPs (Option 1)

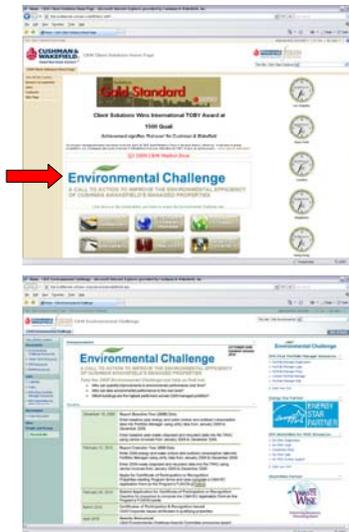
Two options:

- CW//now; or
- Fusion Portal



## 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](mailto: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



# C&W Environmental Challenge

**CUSHMAN WAKEFIELD**  
CLIENT SOLUTIONS

**Environmental Challenge**

A CALL TO ACTION TO IMPROVE THE ENVIRONMENTAL EFFICIENCY OF CUSHMAN WAKEFIELD'S MANAGED PROPERTIES

Take the C&W Environmental Challenge and take us find out:

- Who can significantly improve its environmental performance over time?
- Who can take environmental performance to the next level?
- Which buildings?

**WHAT IS THE CHALLENGE GOAL?**

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.

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**WHAT IS THE C&W ENVIRONMENTAL CHALLENGE?**

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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](http://www.energystar.gov/training)
- Benchmarking Starter Kit  
[http://www.energystar.gov/index.cfm?c=comm\\_real\\_estate.bus\\_comm\\_realestate\\_bm\\_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](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](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](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 Buildings (1) All Data (1) Home (1)

Select View: [ENV Environmental Challenge](#) [Compare](#) [Add Data](#)

12 Month Ending	Baseline Energy Performance Factor (EPF)	Current Rating (1-5)	Current Overall Score (0-100)	Change from Baseline Adjusted Energy Use (%)	Total Indoor and Outdoor Water Use (gallons)	Change from Baseline Total Indoor and Outdoor Water Use (%)	Change from Baseline LEED Certification (0-100)
December 2017	12.712000	50	50	50	NA	50	50
August 2018	12.712000	51	100.1	100.0	6,400.0	-11.11	100.00
Change							

System Name	System Type	Floor Area (sq. ft.)	% Floor Area	Notes	Actions
12345678	Office	50,000	20		<a href="#">Add Data</a>
87654321	Office	40,000	16		<a href="#">Add Data</a>
QWERTYUI	Office	20,000	8	Facility operating hours is much lower than normal.	<a href="#">Add Data</a>
ASDFGHJK	Office	10,000	4		<a href="#">Add Data</a>
<b>Total</b>		<b>160,000</b>	<b>100</b>		

**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.



# 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:

- OR -

Enter Portfolio Manager Username:

- OR -

Select a Portfolio Manager Master Account:  [Learn more](#) about Master Accounts

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



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



## 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 the groups 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):

# 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					

# 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



# Creating a Custom View: Step 1



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

Select View: Summary Energy Use  Create New 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					





# Frequently Asked Questions



# 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 Views](#)

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)
<a href="#">December 2007</a>	12/31/2008	N/A	N/A	N/A	N/A	N/A	N/A
<a href="#">August 2009</a>	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](https://www.energystar.gov/istar/pmpam/help/Warning_Messages.htm)



## 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 Periods | Set Energy Performance Target

Select View:  [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 <sub>2</sub> e)
<input type="text" value="December 2008"/>	12/31/2008	70	212.0	0.0	7,200.0	0.00	0.00
<input type="text" value="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

## 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

## 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.



## 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)**

## Environmental Challenge Timeline

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



## Questions



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