

# GREEN BUSINESS CHALLENGE



## Program Overview & Data Management Best Practices



## The Need

Growing need for practical tools that allow local governments to **engage the business community** in climate protection and sustainability

- Energy use in commercial buildings accounts for **17%** of U.S. GHG emissions at a cost of more than **\$100 billion per year**

# How it Works

1. Begin planning your Challenge program
2. Develop goals and strategies for businesses
3. Create a baseline survey and scorecard/“activities” where business can earn points
4. Engage partners and recruit participants
5. Conduct trainings and events for businesses
6. Keep participants engaged
7. Tally results and host an awards ceremony

## GREEN BUSINESS CHALLENGE



AN ICLEI USA PROGRAM

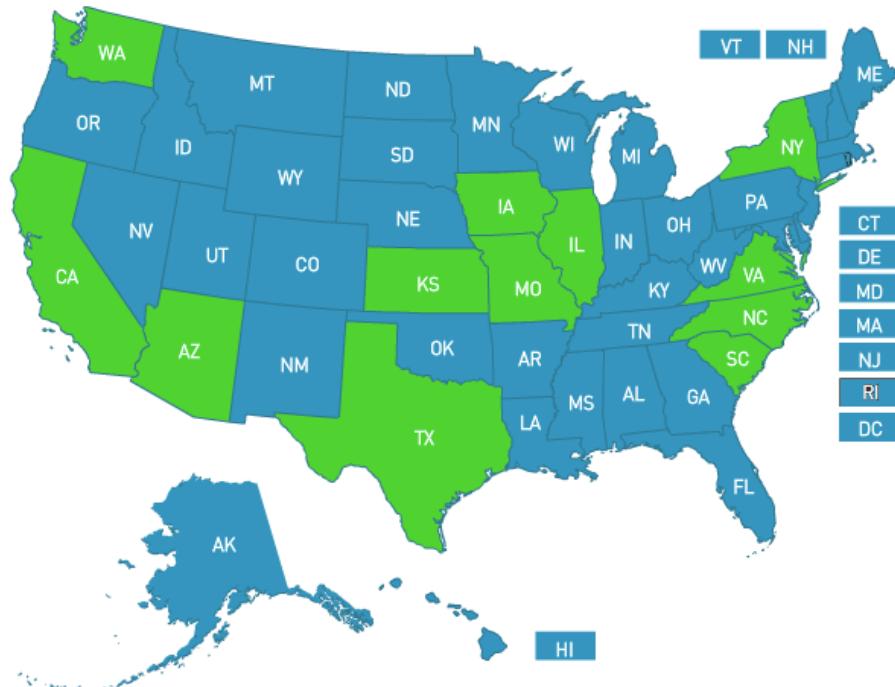
# Green Business Challenge (GBC)

A unique program that enables local governments and NGOs to engage businesses in a friendly competition to save energy, reduce waste and water consumption, procure greener products, and implement other sustainable activities.

- Online software, guidance documents, templates and scorecards, marketing materials, sponsorship support, and network



# Existing or Past GBC Programs (Green)



Arlington County, VA	Lawrence, KS
Austin, TX*	Loudoun County, VA
Bellevue, WA*	Port of San Diego, CA
Charleston, SC	St. Louis, MO
Charlottesville, VA	Triangle J COG, NC*
Chicago , IL*	Tucson, AZ
Chula Vista, CA*	Washington, DC
Decorah, IA	Westchester County, NY
Houston, TX	

\* Received GBC Implementation Pack support from Office Depot

# Why Green Business Challenge?

## For Local Communities:

- Cost-effective, measurable results
- Identifies candidates for intervention or other engagement; jumpstarts dialogue with biz community
- Visibility as joint public-private effort
- Easy setup and customizability
- Smart online platform as “hub”
- Guidance and national network
- Access to corporate sponsors
- Integration with local initiatives

## For Businesses:

- Quick bottom line cost savings
- Recognition and leadership; acknowledgement at all stages of sustainability journey
- Competition and gamification to make it fun and worthwhile
- Benchmarking and marketing for ongoing motivation
- Increased operational effectiveness
- Community impact

# 2013-2014 Implementation Pack

\$20,000 of cash and in-kind support from Office Depot composed of:

- ICLEI guidance and coordination
- GreenPSF web license and customization
- Event management funds
- Office Depot gift cards



# Gamification Principles

- Achievements
- Community Collaboration
- Points
- Progression
- Status

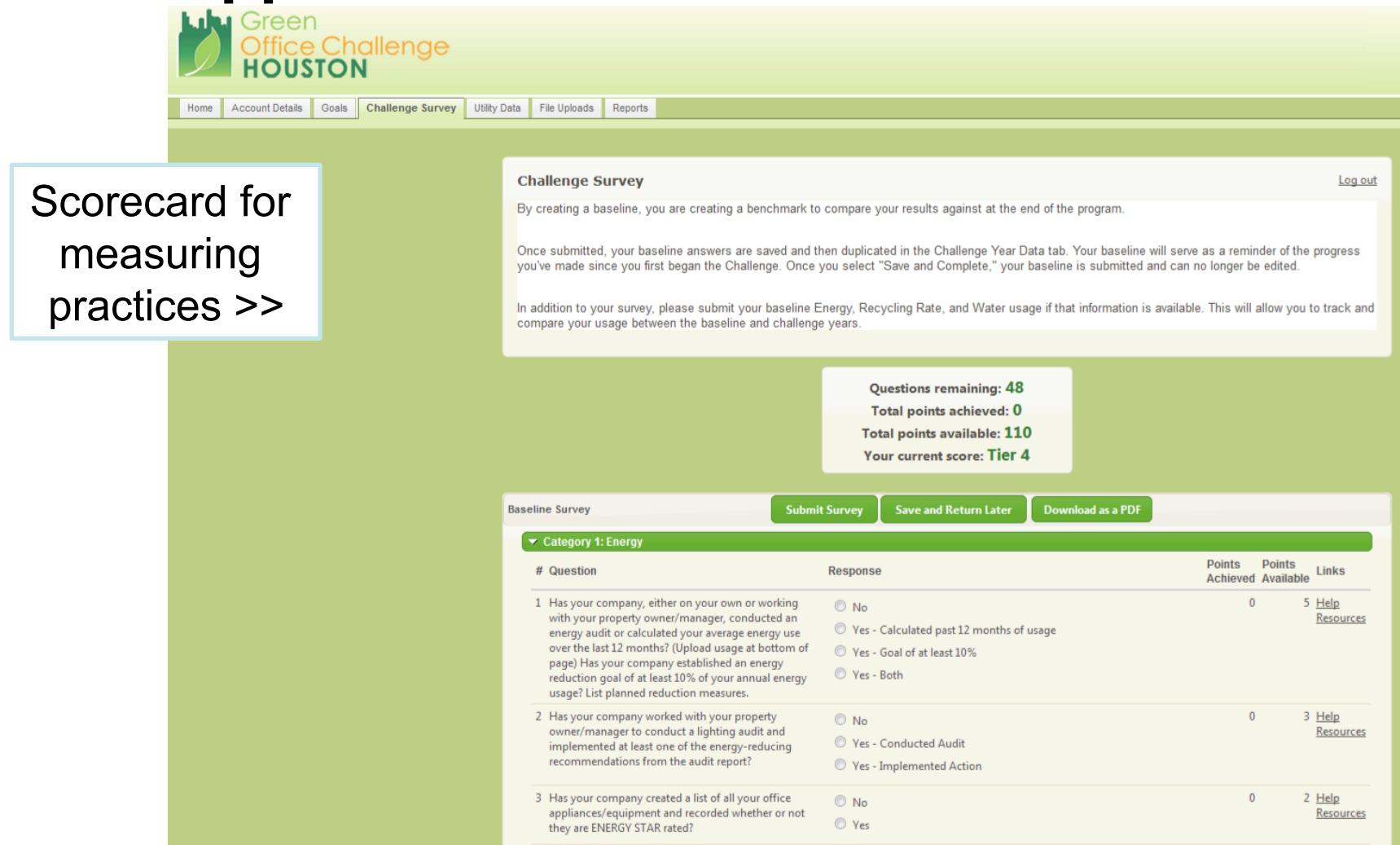


# How GBC Data Management Works

	Green Business Scorecard	EPA Portfolio Manager	Green Business Challenge Web App
Tracks participant energy usage		■	■
Tracks participant waste diversion rate			■
Tracks participant water usage		■	■
Tracks participant behavioral actions	■		■
Aggregates participant data		■	■

Customizable  
Categories

# How GBC Data Management Works- GBC App



**Scorecard for measuring practices >>**

**Challenge Survey**

By creating a baseline, you are creating a benchmark to compare your results against at the end of the program.

Once submitted, your baseline answers are saved and then duplicated in the Challenge Year Data tab. Your baseline will serve as a reminder of the progress you've made since you first began the Challenge. Once you select "Save and Complete," your baseline is submitted and can no longer be edited.

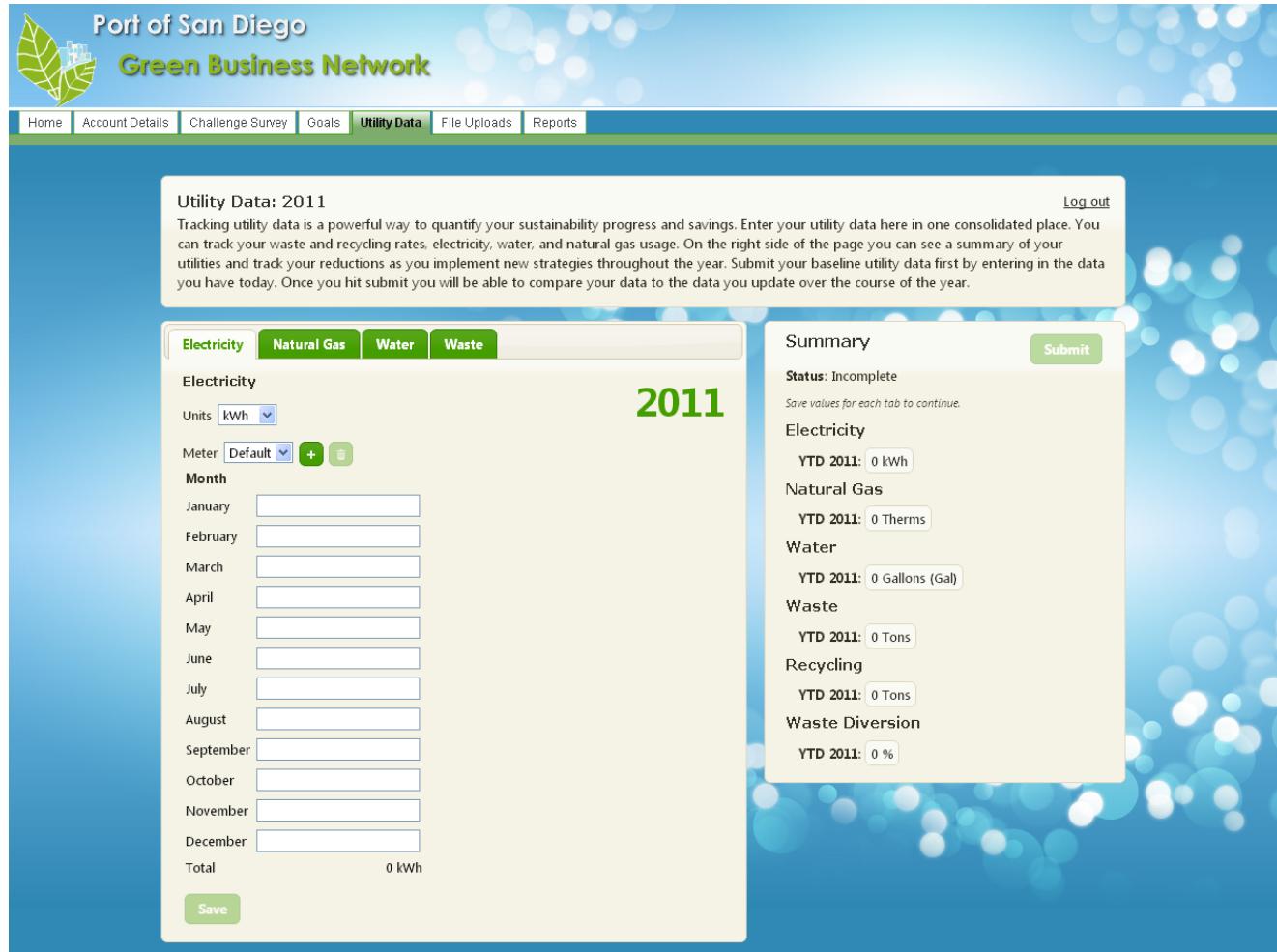
In addition to your survey, please submit your baseline Energy, Recycling Rate, and Water usage if that information is available. This will allow you to track and compare your usage between the baseline and challenge years.

**Questions remaining: 48**  
**Total points achieved: 0**  
**Total points available: 110**  
**Your current score: Tier 4**

# Question	Response	Points Achieved	Points Available	Links
1 Has your company, either on your own or working with your property owner/manager, conducted an energy audit or calculated your average energy use over the last 12 months? (Upload usage at bottom of page) Has your company established an energy reduction goal of at least 10% of your annual energy usage? List planned reduction measures.	<input type="radio"/> No <input type="radio"/> Yes - Calculated past 12 months of usage <input type="radio"/> Yes - Goal of at least 10% <input type="radio"/> Yes - Both	0	5	<a href="#">Help Resources</a>
2 Has your company worked with your property owner/manager to conduct a lighting audit and implemented at least one of the energy-reducing recommendations from the audit report?	<input type="radio"/> No <input type="radio"/> Yes - Conducted Audit <input type="radio"/> Yes - Implemented Action	0	3	<a href="#">Help Resources</a>
3 Has your company created a list of all your office appliances/equipment and recorded whether or not they are ENERGY STAR rated?	<input type="radio"/> No <input type="radio"/> Yes	0	2	<a href="#">Help Resources</a>

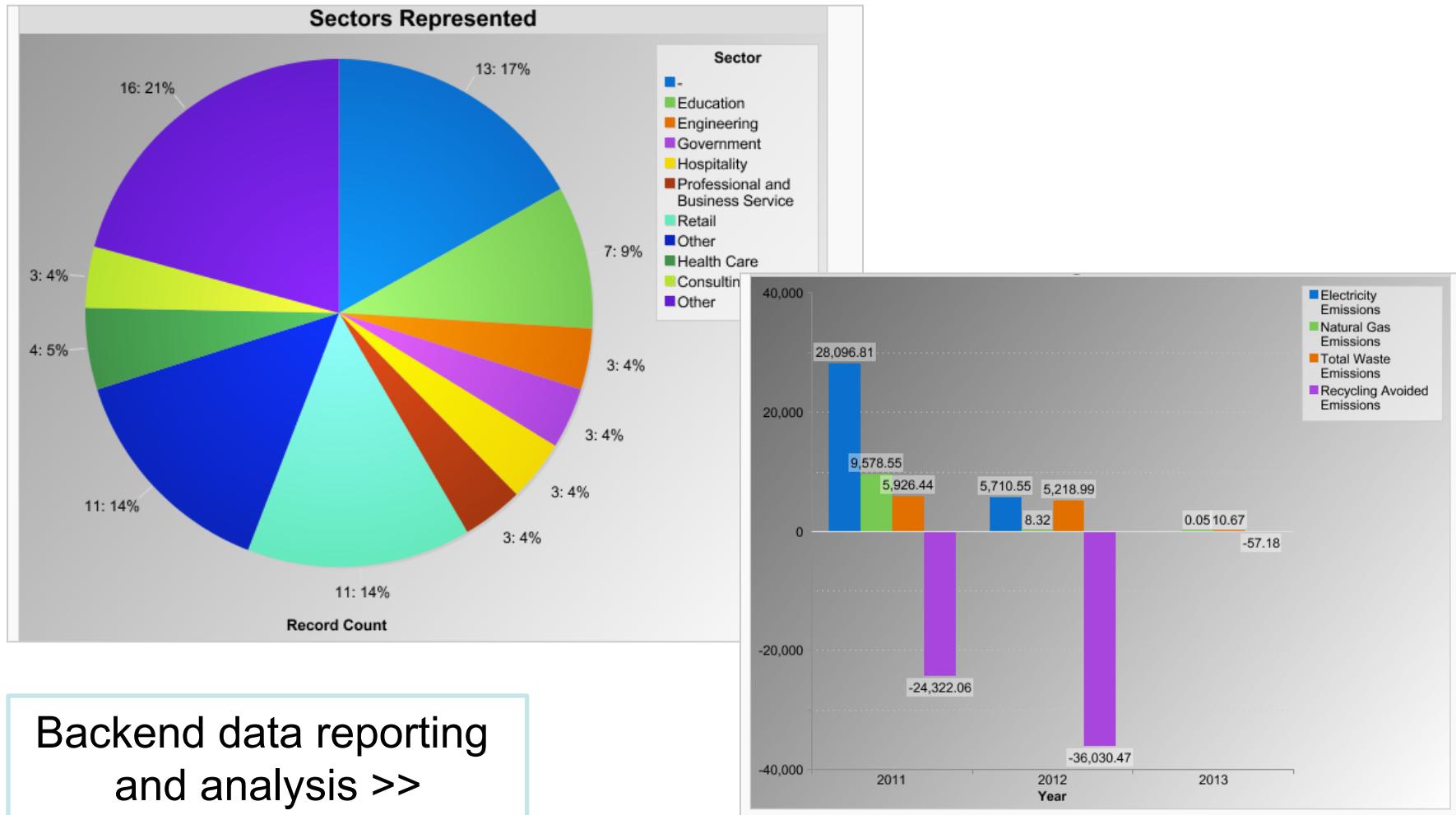
# How GBC Data Management Works- GBC App

Utility data for  
measuring  
savings >>



The screenshot shows the 'Utility Data' section of the Port of San Diego Green Business Network website for the year 2011. The page has a blue header with the network's logo and navigation links for Home, Account Details, Challenge Survey, Goals, Utility Data (which is active and highlighted in green), File Uploads, and Reports. The main content area has a light blue background with a bokeh effect. It features a 'Utility Data: 2011' section with a 'Log out' link. Below this, there are tabs for Electricity, Natural Gas, Water, and Waste, with Electricity selected. The Electricity section includes dropdowns for Units (kWh) and Meter (Default), and a list of input fields for each month from January to December. A 'Save' button is at the bottom. To the right is a 'Summary' box with a 'Submit' button. The summary box shows 'Status: Incomplete' and a note to 'Save values for each tab to continue.' It lists YTD 2011 values for Electricity (0 kWh), Natural Gas (0 Therms), Water (0 Gallons (Gal)), Waste (0 Tons), and Recycling (0 Tons). The 'Waste Diversion' section shows YTD 2011 at 0 %.

# How GBC Data Management Works- GBC App



# How GBC Data Management Works- GreenPSF

**Welcome, Chicago!**

The Green Office Challenge is designed to help Chicago businesses and employees improve sustainability in the workplace and beyond.

Join the Challenge to reduce energy, materials, and water consumption – and encourage your colleagues and peers to do the same. Demonstrate environmental leadership and help us make Chicago an even better place to live and work.

Register for the Challenge and participate from February to November 2013.

**5 Energy Efficiency**

**5.05 - Retrofit your space with lighting controls**

**150 PTS**

**Complete this Activity**

**Description**

**Introduction**

If a lighting controls audit uncovers savings opportunities with an acceptable financial return, the next step is execute a retrofit to realize the energy conservation and savings opportunities.

**Complete the Activity**

- Prerequisite Activity: get a lighting controls audit (see Related Activities)
- Launch [Lighting Per Square Foot](#) and pick up to four (4) ComEd Trade Allies to submit competitive bids, or consult with a lighting professional
- Retrofit your space with a lighting controls system

**Earn Challenge Points**

- Mark the Activity as 'Completed'
- Write a short description of the lighting controls retrofit project and upload a photo of your new controls

**Learn More**

- How lighting controls audits work
- How lighting controls work
- Determining whether you currently have lighting controls in your office
- How Lighting Per Square Foot works
- Want to get more information about incentives for getting a lighting audit? Click [here](#) to ask for information from ComEd Smart Ideas

# How GBC Data Management Works- GreenPSF

 **Green Office Challenge**

**Knowledge Base**  **Go**

## Purchasing energy efficient office equipment

Posted on February 5, 2013 by amoree | [Leave a reply](#)

**What is Energy Efficient Office Equipment?**

Today, office equipment accounts for an ever-increasing portion of most office's energy bill. According to the Pacific Gas & Electric Company, businesses across the United States spend more than \$2 billion collectively on electricity consumed by office equipment each year (see [PG&E Energy Center Fact Sheet](#)). One of the easiest ways to reduce energy use in the office and save money is to purchase energy efficient office equipment.

**How Does my Office Find and Purchase Energy Efficient Equipment?**

 Fortunately, finding the most energy efficient office equipment available is made easy by the [ENERGY STAR](#) certification program, a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy. Products with an Energy Star label must meet strict energy efficiency guidelines set out by the U.S. EPA. See [Energy Star](#) for complete details. The EPA also provides a [step-by-step guide](#) to purchasing Energy Star appliances and equipment.

In addition to purchasing EnergyStar compliant office equipment, remember the following tips:

1) Make sure energy saving settings are enabled. In some cases, they may not be optimized when purchasing office equipment. Settings, display settings, and other power saving measures, such as processor and hard drive settings for computers, are often not optimized for energy efficiency.

Knowledge Base and  
Ways to Save for “how  
to” recommendations  
for achieving Activities

<<

## Ways to Save

Penton Media

[Energy Efficiency](#) > [Lighting](#) > [Controls](#)

### Install Lighting Controls



According to the US Department of Energy, in a typical commercial office building lighting accounts for between 30-40% of electricity consumption. (Similar figures apply to retail, hospitality, healthcare, education, and light industrial properties.) By lighting unoccupied areas – or by over-lighting workspaces and common areas – businesses waste resources. Lighting control systems can reduce related electricity consumption by up to half of related energy costs.

Lighting controls automatically detect whether light is needed and automatically dim or turn off lights. The basic premise applies to both interior and exterior spaces. Most lighting controls can be added to existing spaces without requiring major retrofit work. Wired and wireless versions are available; along with the capability to synchronize multiple devices together with software.

**Get Started**

# How GBC Data Management Works- GreenPSF

Leaderboard ranks participants by points achieved and participants can “spy” on each other’s activities

>>

## Leaderboard

Rank	Office	Points
1	71 South Wacker Drive Holdings LLC	6170
2	Perkins+Will	6020
3	Riverview Realty Partners	5615
4	Aronberg Goldgehn	5040
5	Messe Dusseldorf North America	4475
5	Thornton Tomasetti	4475
7	KPMG LLP	4360

Completed: Engage your Property Manager (PM) to discuss...	Apr 10, 2013	50 points
Completed: Get a lighting controls audit	Apr 10, 2013	100 points
Completed: Get a lighting audit	Apr 10, 2013	100 points
Completed: Communicate with office members	Apr 08, 2013	50 points
Completed: Communicate with office members	Apr 05, 2013	50 points
Completed: Like us, Follow us, Join us	Apr 04, 2013	20 points

# How GBC Data Management Works- GreenPSF

Profile & utility  
information is used to  
drive more tailored  
insights and savings  
recommendations

>>

My Space Tenant Assessment

By completing the Tenant Assessment you'll gain access to actionable Ways to Save, Incentives, and Offers. Click the question marks for detailed instructions and access to additional resources.

1. Interest Level

2. Electricity

3. Lighting

4. Lighting Controls

5. Materials & Waste

6. Office Equipment

7. Water Efficiency

8. Transportation

9. Purchasing

10. Cleaning

**Lighting**

**Lighting Audit in Past Five Years:**  
Have you had a lighting audit in the past five (5) years?

No

**Estimated Lighting Systems Age:**  
Indicate the vintage of your lighting systems.

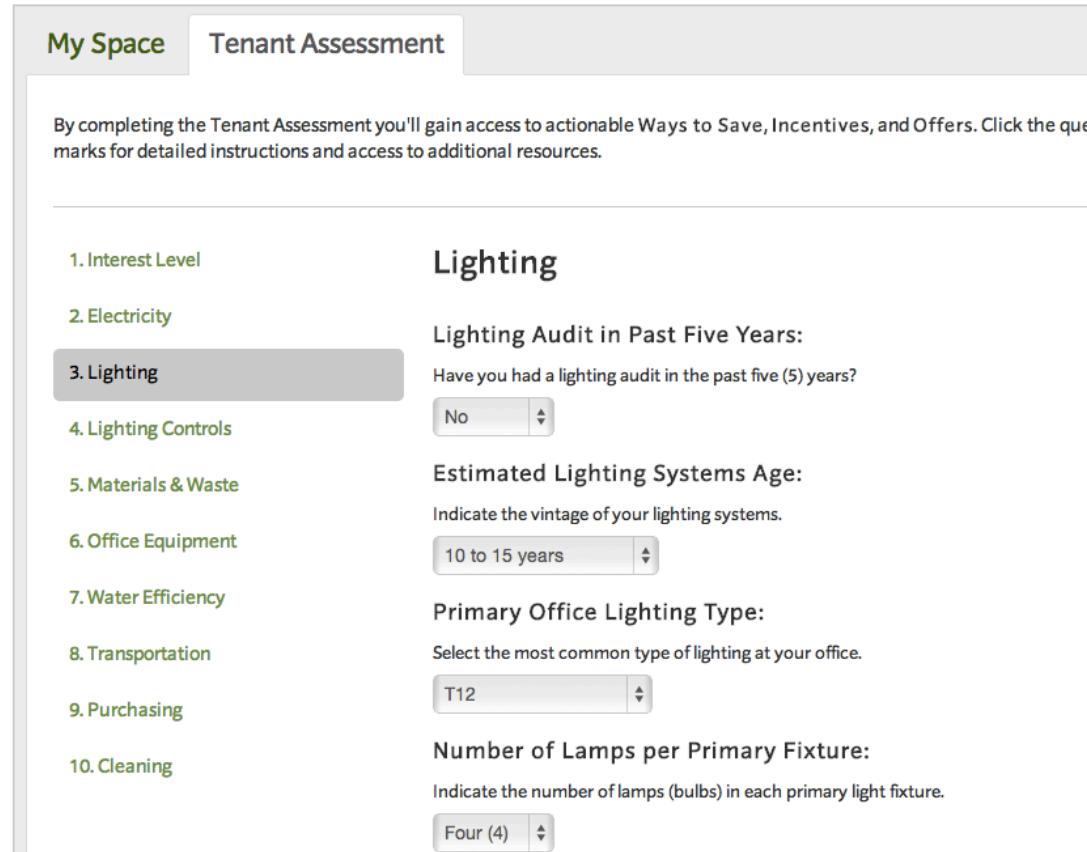
10 to 15 years

**Primary Office Lighting Type:**  
Select the most common type of lighting at your office.

T12

**Number of Lamps per Primary Fixture:**  
Indicate the number of lamps (bulbs) in each primary light fixture.

Four (4)



# Data Management- Looking Ahead

- Tighter integration with Portfolio Manager and related DOE tools
  - Aggregate performance data can be used to reveal the market potential for green job development.
- Social applications and more gamification features
  - Building a culture of sharing ideas in the business community
  - “Innovation” categories to crowdsource best ideas from the community that can be further replicated
- Defining best practices and standards
  - Key challenge to making the individual challenge programs comparable
  - Will help to facilitate sharing ideas easily across challenge programs

# Case Study #1: Houston Green Office Challenge

- Round 1 launched in 2011, currently an Implementation Pack recipient for 2014
- 2011-2012 results:
  - 375 buildings, approx. 75 million square feet
  - Reduced energy usage by 28 million kilowatt hours
  - Reduced water usage by 74 million gallons
  - More than 90 percent recycled in the office, diverting 40 percent of waste from the landfill
  - Also: printing policies, Green Teams, commuting policies



# Houston Best Practices

- Be flexible- Gave participants the choice of using the GBC App and/or Portfolio Manager for data reporting
- Allow for various layers of competitors- Tenants, property managers, districts (6 in Houston)
- Utilize GBC as a way to get the word out about and create synergies with other city efforts- The program helped Houston rebrand itself as a more sustainable city; integrated GBC with DOE Better Buildings Challenge
- Utilize GBC as a way to gauge sustainability trends and provide customer insights- Collected data and contacts to inform future policy engagement, provide basis for future marketing

# Case Study #2: Chicago Green Office Challenge

- Round 1 launched in 2009, Round 3 currently in progress
- Round 2 results:
  - Nearly 150 participating property manager and tenant companies
  - Reduced electricity consumption by more than 124 million kWh
  - Kept **>85,000 metric tons of carbon dioxide** from the atmosphere
  - Saved more than **\$17 million** by reducing electricity use



Photo credit: anneh632 via Flickr Creative Commons.

# Chicago Best Practices

- View metrics holistically- energy (kWh), emissions (MT CO<sub>2</sub>e), water (gallons), waste (pounds), conventional transportation distance traveled (miles)
- Partner with local NGOs- Delta Institute has been crucial in implementation
- Engage sponsors- No money is coming from the City
- Treat sustainability as a process- Constantly adding new carrots and allowing participants to even design their own activities

# Chicago Best Practices

Category	Input (Collected Data)	Output/Impacts	Methods				
Energy	Electricity consumption per month (kWh) for baseline year and current year	Electricity consumption (kWh) reduced from baseline year to current	Total baseline year less total current year	Transportation	Total miles traveled by: SOV SOV-0 Carpool Bus Train ("L") Train (Metra) Bike Walk Telecommute/flex hours (miles avoided)	Total distance (miles) traveled by "alternative transportation" (Carpool, bus, train, bike, walk, telecommute/flex hours)	Sum of all alternative methods
		Estimated GHG Emissions (MT CO2e) reduced from baseline year to current	eGRID subregion emission factor (provided by EPA)		Total distance (miles) traveled by "active transportation" (bike, walk)	Sum of all active methods	
		Estimated cost (\$) reduced from baseline year to current	Average regional price per kWh		GHG emissions (MT CO2e) avoided due to alternative and active transportation	Various standards used in our CGOC-developed calculator (see calculator for sources)	
		Estimated water (gallons) avoided by reducing electricity use	NREL standard (found in "US Water Consumption per kWh of Energy Consumed by State")		Estimated health benefits (calories burned)	Borrow standard from transportation partner in Chicago	
		GHG emissions avoided via RECs and carbon offsets	Sum of all reported				
Water	Water consumption per month (gallons) for baseline year and current year	Water consumption (gallons) reduced from baseline year to current	Total baseline year less total current year	Purchasing	Type of paper (% recycled) and amount of paper (reams)	Being developed	Being developed
		Estimated energy use (kWh) avoided due to reduced water consumption	ICLEI "U.S. Community Protocol for Accounting and Reporting of GHG Emissions"		% duplex printing		
		Estimated GHG emissions (MTCO2e) avoided due to reduced water consumption	eGRID subregion emission factor (provided by EPA)	Education and Outreach			
Materials/Waste	Total waste (pounds) and total recycling (pounds) by one of the following: Week Month Year	Estimated total (pounds) material recycled	Sum (extrapolated from timeframe reported)		Number of participants referring/referred by others	Relationships made (count)	Total companies reached and total number of companies reaching out via network effect
		Estimated total (pounds) material composted	Sum (extrapolated from timeframe reported)				
		Estimated GHG emissions (MTCO2e) avoided	U.S. EPA (via ICLEI "U.S. Community Protocol for Accounting and Reporting of GHG Emissions")	Innovation			
		Estimated landfill (acres) avoided	Provided in reports submitted		Areas of interest outside of available activities	Number of innovation activities completed per area of interest (count)	Simple count
		Average recycling rate	Mean of reported rates				

# Current Program Spotlight: Charlottesville Area Better Business Challenge

- GBC App incorporated into existing program this year
- Example of a “quick launch”: Developed a branded platform for eight different topic areas in 3 weeks
- Local NGO runs the program, rather than the City/regional gov



CHARLOTTESVILLE AREA  
**BETTER BUSINESS CHALLENGE**  
SMART. SUSTAINABLE. SUCCESSFUL.

# Looking Ahead

- Scaling nationwide
- Expanded technology partnerships
- Advisory Committee engagement
- Library build-out
- Demonstration of collective results
- GBENN & GBC synergies



# Thank You



Caroline Teng  
Senior Program Officer  
ICLEI USA  
[caroline.teng@iclei.org](mailto:caroline.teng@iclei.org)  
510-844-0699 ext. 322