

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  PROGRAM

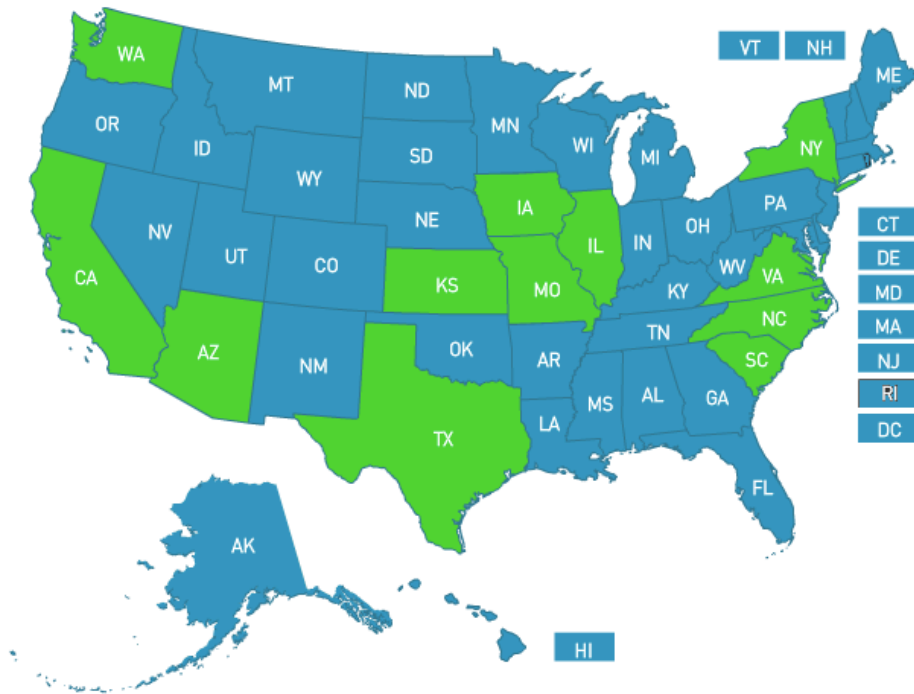
Green Business Challenge (GBC)

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
Customizable Categories	Tracks participant energy usage		■	■
	Tracks participant waste diversion rate			■
	Tracks participant water usage		■	■
	Tracks participant behavioral actions	■		■
	Aggregates participant data		■	■

How GBC Data Management Works- GBC App

Scorecard for
measuring
practices >>

The screenshot shows the 'Challenge Survey' page of the Green Office Challenge Houston app. The header includes the logo and navigation tabs: Home, Account Details, Goals, Challenge Survey (active), Utility Data, File Uploads, and Reports. A 'Log out' link is in the top right. The main content area contains instructions on creating a baseline and submitting the survey. A summary box shows: Questions remaining: 48, Total points achieved: 0, Total points available: 110, and Your current score: Tier 4. Below this is a 'Baseline Survey' section with buttons for 'Submit Survey', 'Save and Return Later', and 'Download as a PDF'. A dropdown menu shows 'Category 1: Energy' expanded, displaying a table of survey questions.

#	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	Help Resources
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	Help Resources
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	Help Resources

How GBC Data Management Works- GBC App

Utility data for
measuring
savings >>

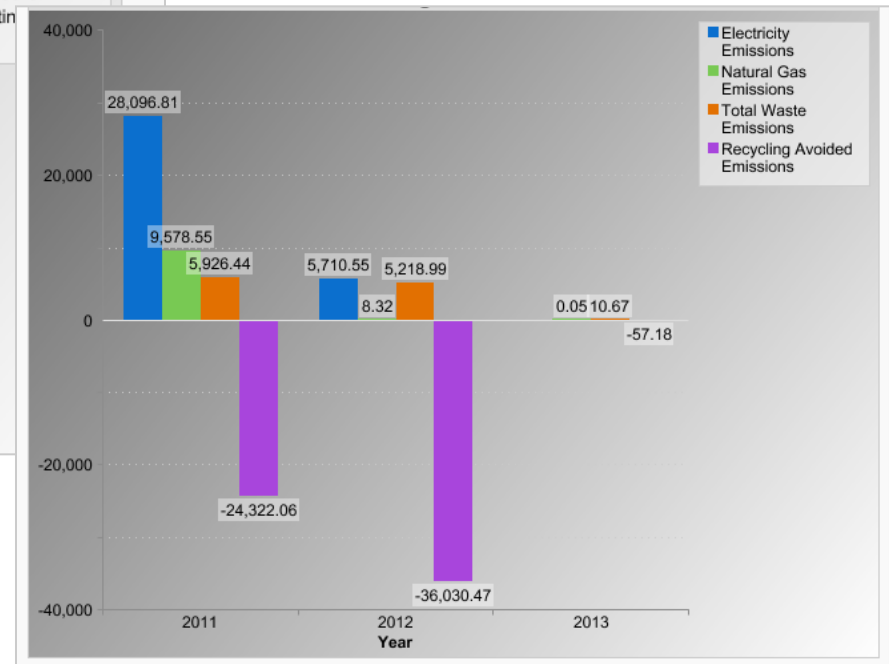
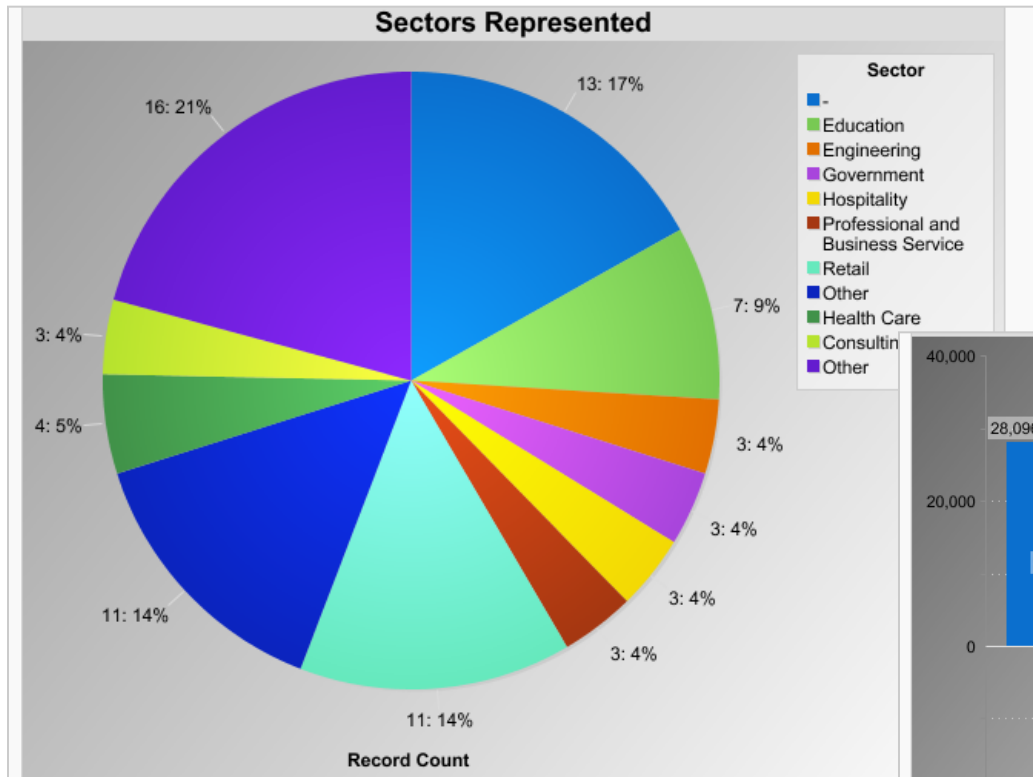
The screenshot shows the 'Utility Data' section of the Port of San Diego Green Business Network. The page has a blue header with the logo and navigation tabs: Home, Account Details, Challenge Survey, Goals, **Utility Data**, File Uploads, and Reports. A 'Log out' link is in the top right.

Utility Data: 2011
Tracking utility data is a powerful way to quantify your sustainability progress and savings. Enter your utility data here in one consolidated place. You can track your waste and recycling rates, electricity, water, and natural gas usage. On the right side of the page you can see a summary of your utilities and track your reductions as you implement new strategies throughout the year. Submit your baseline utility data first by entering in the data you have today. Once you hit submit you will be able to compare your data to the data you update over the course of the year.

The main form is divided into four tabs: **Electricity**, Natural Gas, Water, and Waste. The 'Electricity' tab is active, showing a form for entering monthly data for 2011. The form includes a 'Units' dropdown set to 'kWh', a 'Meter' dropdown set to 'Default', and a list of months from January to December, each with an input field. A 'Total' field at the bottom shows '0 kWh'. A 'Save' button is at the bottom left.


On the right, a 'Summary' box shows the 'Status: Incomplete' and a 'Submit' button. It lists the YTD 2011 values for each category: Electricity (0 kWh), Natural Gas (0 Therms), Water (0 Gallons (Gal)), Waste (0 Tons), Recycling (0 Tons), and Waste Diversion (0 %).

How GBC Data Management Works- GBC App



Backend data reporting
and analysis >>

How GBC Data Management Works- GreenPSF



City of Chicago's
Green Office Challenge

a collaborative effort by
Office DEPOT · **ICLEI** · **Delta** · **Green PSF**

🏠 The Challenge Register Sponsorship Contact Us    [Login](#)

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.

The Challenge Station

150 PTS

[Participate](#)

[Register for](#)

Activities for earning points >>

5 Energy Efficiency

5.05 - Retrofit your space with lighting controls

[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

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. Equipment 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 equipment. Check the user manual for settings, display settings, and other power saving measures, such as processor and hard drive settings for computers.

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 CO₂e), 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
		Estimated GHG Emissions (MT CO ₂ e) reduced from baseline year to current	eGRID subregion emission factor (provided by EPA)
		Estimated cost (\$) reduced from baseline year to current	Average regional price per kWh
		Estimated water (gallons) avoided by reducing electricity use	NREL standard (found in "US Water Consumption per kWh of Energy Consumed by State")
		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
		Estimated energy use (kWh) avoided due to reduced water consumption	ICLEI "U.S. Community Protocol for Accounting and Reporting of GHG Emissions"
		Estimated GHG emissions (MTCO ₂ e) avoided due to reduced water consumption	eGRID subregion emission factor (provided by EPA)
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)
		Estimated total (pounds) material composted	Sum (extrapolated from timeframe reported)
		Estimated GHG emissions (MTCO ₂ e) avoided	U.S. EPA (via ICLEI "U.S. Community Protocol for Accounting and Reporting of GHG Emissions")
		Estimated landfill (acres) avoided	Provided in reports submitted
		Average recycling rate	Mean of reported rates

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
		Total distance (miles) traveled by "active transportation" (bike, walk)	Sum of all active methods
		GHG emissions (MT CO ₂ e) avoided due to alternative and active transportation	Various standards used in our CGOC-developed calculator (see calculator for sources)
		Estimated health benefits (calories burned)	Borrow standard from transportation partner in Chicago
Purchasing	Type of paper (% recycled) and amount of paper (reams) % duplex printing	Being developed	Being developed
Education and Outreach	Number of participants referring/referred by others	Relationships made (count)	Total companies reached and total number of companies reaching out via network effect
Innovation	Areas of interest outside of available activities	Number of innovation activities completed per area of interest (count)	Simple count

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

GREEN BUSINESS CHALLENGE



Caroline Teng
Senior Program Officer
ICLEI USA

caroline.teng@iclei.org

510-844-0699 ext. 322