

Innovations in Sustainability:
Law +
Data +
Planning =
Success!



Town of Lantana

Municipal Energy Conservation Coalition – MECC



Florida APA Conference
September 15, 2012

Lantana's Energy Efficiency Grants

- ❖ PBC - \$217,680 for Police Annex Renovation
- ❖ Florida Energy Grant - \$341,000 to develop energy improvements financing program for commercial properties
- ❖ EECBG - \$1,238,300 for 5-city MECC
Energy Audits, Greenhouse Gas, Improvements to
Buildings & Facilities, Planning policies

Palm Beach Grant Local Grant Program

- ❖ Awarded \$217,680 to add Energy Efficiency Improvements to Police Annex Building Renovation
 - ❖ 10 kW Solar Array – sell power back to FPL
 - ❖ High SEER HVAC system & use condensate for toilet
 - ❖ Two 500-gallon cisterns for irrigation
 - ❖ High-efficiency windows
 - ❖ Roof – R-30 Insulation
- ❖ Weatherization, bamboo flooring, low VOC paints

Municipal Energy Conservation Coalition – MECC

- ❖ 5 municipalities – Lantana, Atlantis, Ocean Ridge, Haverhill, Palm Beach Shores – joined to improve grant application's competitiveness
- ❖ Grant Amount – \$1,238,300, approx. \$247,000 per town
- ❖ Lantana was Grant Recipient and Administrator – \$115,000 for Admin. Assistance consultant and partial salary for 2 Town staff
- ❖ Started April 2011, ended August 31, 2012

Projects Funded by Grant

- ❖ Energy Conservation Improvements to Municipal Buildings & Facilities
- ❖ Energy Audits for Town's facilities
- ❖ Greenhouse Gas Inventories and Reduction strategy development
- ❖ Rebates for residential energy improvements – Atlantis, Ocean Ridge & Haverhill only
- ❖ Energy Efficiency and Conservation Strategy
- ❖ Building Code and Transportation Strategy Development
- ❖ Education and Outreach

Consultants

Erin L. Deady, P.A. ~ admin. assistance & development of energy conservation strategy/sustainability plan

Eaton Corp. & Vanasse Hangen Bruslin (VHB) ~ energy reviews (audits), greenhouse gas inventories, ongoing monitoring

1000 Friends of FL ~ transportation component of plan

EcoSmart PR ~ residential rebate managers

Radio Green Earth ~ media, education & website

MECC

Energy Conservation Improvements to Municipal Facilities

- ❖ HVAC & ductwork replacements & occupancy sensors
- ❖ Lighting conversions to T8 fluorescent
- ❖ Parking lot lighting upgrades
- ❖ Window & door replacement & window tinting
- ❖ Reflective roof coating
- ❖ Pump upgrades for water & wastewater systems

MECC

Residential Rebate Program

- ❖ 3 municipalities participated ~ Atlantis, Haverhill & Ocean Ridge
- ❖ Program ran from Dec. 2011 until April 30, 2012
- ❖ Total projects and monies ~
 - ❖ Programmable Thermostats ~ 39 for \$1,170
 - ❖ Central AC Units ~ 54 for \$111,702
 - ❖ AC Duct work ~ 16 for \$2,464
 - ❖ Ceiling insulation ~ 3 for \$900
 - ❖ Solar water heaters ~ 2 for \$2,000
 - ❖ Reflective roof coating ~ 1 for \$325
 - Totals 115 for \$118,561

MECC

Energy Conservation Strategy/ Sustainability Plan

- ❖ Energy conservation strategies – comp. plan policies, land development issues
- ❖ Recommendations across 8 Focus areas
- ❖ GHG reduction strategies – municipal operations, community-wide, transportation system improvements
- ❖ Education & Outreach – Radio Green Earth website
- ❖ Ongoing monitoring of impacts of improvements

Florida Green Finance Authority

- ❖ Florida Energy Grant ~ \$341,000 to develop program to finance energy improvements for commercial properties
- ❖ Five local governments participating ~ Mangonia Park, West Palm Beach, Delray Beach, Boynton Beach, more to come
- ❖ “PACE” ~ Property Assessed Clean Energy
 - ❖ Pay for energy improvements through assessment on tax bill
 - ❖ More secure, so Lower Rates
 - ❖ Commercial properties only are eligible, for now.....
- ❖ Green Business Certification program



**“Sustainability is a practice,
not a project.
And data management is the
key to success.”**



EcoAsset Solutions



Outsourced Sustainability Management Services

Our mission is to prove the value of sustainability for our clients through Performance Tracking and Sustainability Data Management

- Improve competitiveness & grow revenue
- Eliminate resource waste to improve profit margins
- Increase employee and customer loyalty
- Address Risk Management (Compliance, Environmental, Financial Reporting)

Why data?

- You can't manage what you don't measure
- Entire value chain must be engaged to make change happen
- Data must be purposeful, relevant, attractive, easy to comprehend & easy to capture

The Journey to Sustainability



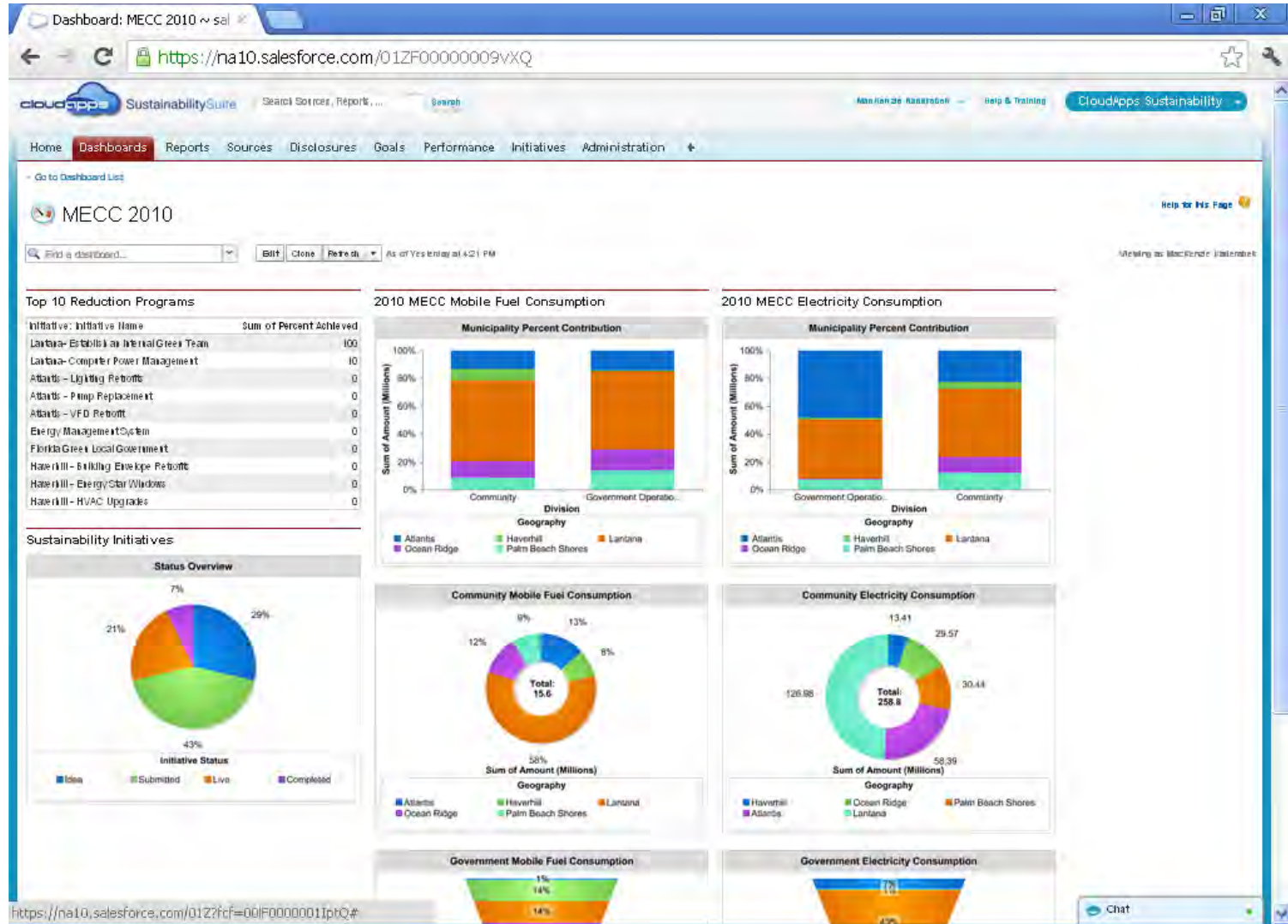
Before...

jch_Five City Data Collection Spreadsheets_ECO ASSETS.xlsx - Microsoft Excel

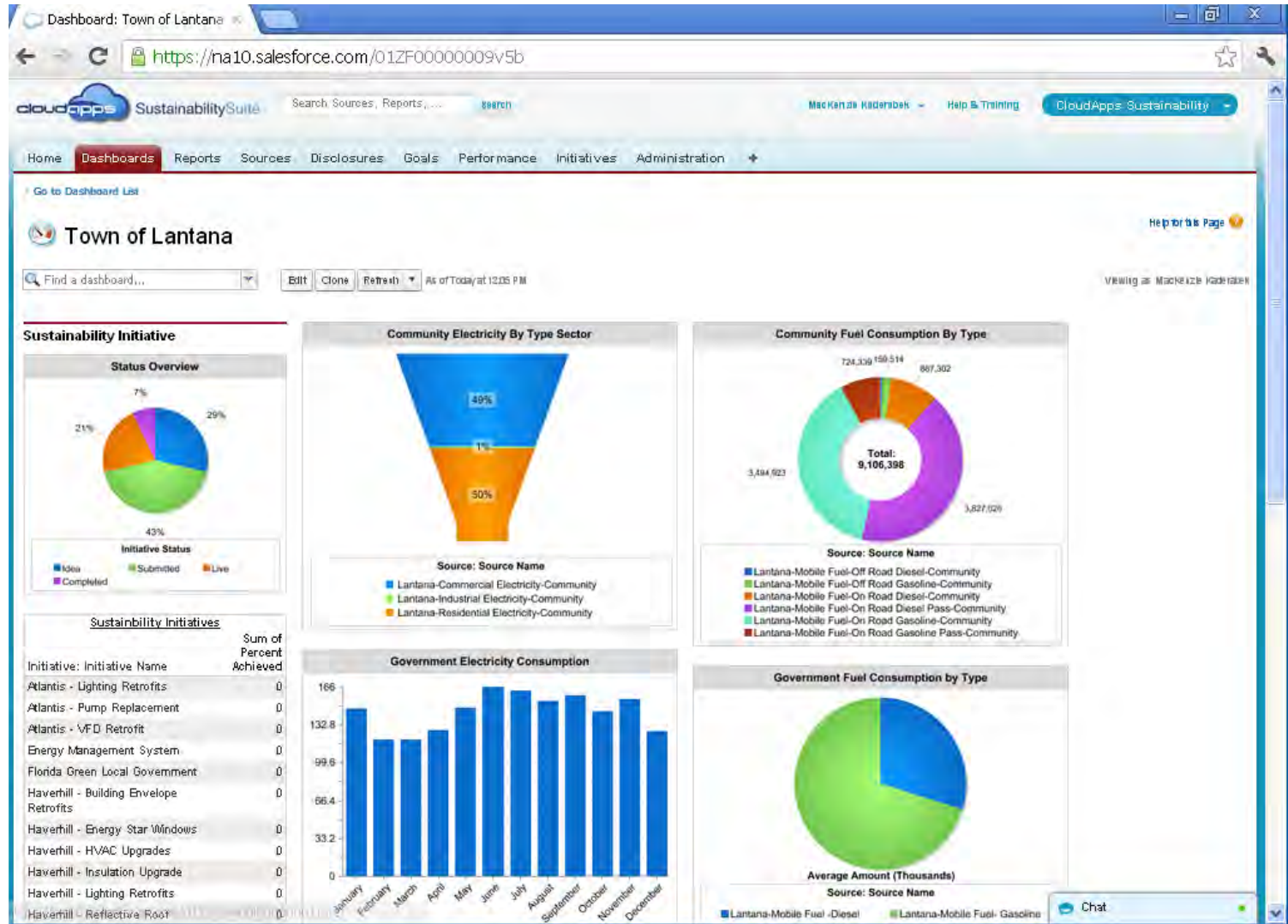
	B	C	D	E	F	G	H	I
41	Haverhill	Energy/ Buildings	Community		Commercial GHG Emissions	Metric Tons CO2e	1143.180	
42	Ocean Ridge	Energy/ Buildings	Community	C-E 1	Community electricity use	MWh	5,920,924.120	GHG report
43	Atlantis	Energy/ Buildings	Community	C-E 1	Community electricity use	MWh	3,214,061.200	GHG report
44	Palm Beach Shores	Energy/ Buildings	Community	C-E 1	Community electricity use	MWh	1,640,989.620	GHG report
45	Lantana	Energy/ Buildings	Community	C-E 1	Community energy use	MWh	1,065,873.300	GHG Inventory
46	Haverhill	Energy/ Buildings	Community	C-E 1	Community energy use	MWh	507198.280	
47	Lantana	Energy/ Buildings	Community	C-E 2	Community GHG Emissions	Metric Tons CO2e	67,918.040	GHG Inventory
48	Haverhill	Energy/ Buildings	Community	C-E 2	Community GHG Emissions	Metric Tons CO2e	490756.980	
49	Ocean Ridge	Energy/ Buildings	Community	C-E 2	Community GHG Emissions (from electricity use - scope 2)	Metric Tons CO2e	16,441.300	GHG report
50	Atlantis	Energy/ Buildings	Community	C-E 2	Community GHG Emissions (from electricity use - scope 2)	Metric Tons CO2e	312,890.420	GHG report
51	Palm Beach Shores	Energy/ Buildings	Community	C-E 2	Community GHG Emissions (from electricity use - scope 2)	Metric Tons CO2e	177,866.560	GHG report
52	Lantana	General	Community		Community Scope 1 & 2 Emissions	Metric Tons CO2e	110145.000	GHG Inventory
53	Ocean Ridge	General	Community		Community Scope 1 & 2 Emissions	Metric Tons CO2e	24,878.860	GHG report
54	Atlantis	General	Community		Community Scope 1 & 2 Emissions	Metric Tons CO2e	42842.700	GHG report
55	Palm Beach Shores	General	Community		Community Scope 1 & 2 Emissions	Metric Tons CO2e	23,571.910	GHG report
56	Haverhill	General	Community		Community Scope 1 & 2 Emissions	Metric Tons CO2e	13,337.900	GHG report
	Lantana	Waste	Community	C-WST 3	Community waste tonnage - disposed of in a landfill or waste-to-energy facility	Tonnage	3995.43	Sandy Lees, Solid waste report 4181.0 provided by Sandra Lees, Recycling Manager at Solid

Combo Lantana Haverhill Ocean Ridge Atlantis Palm Beach Shores State County Strategies&M

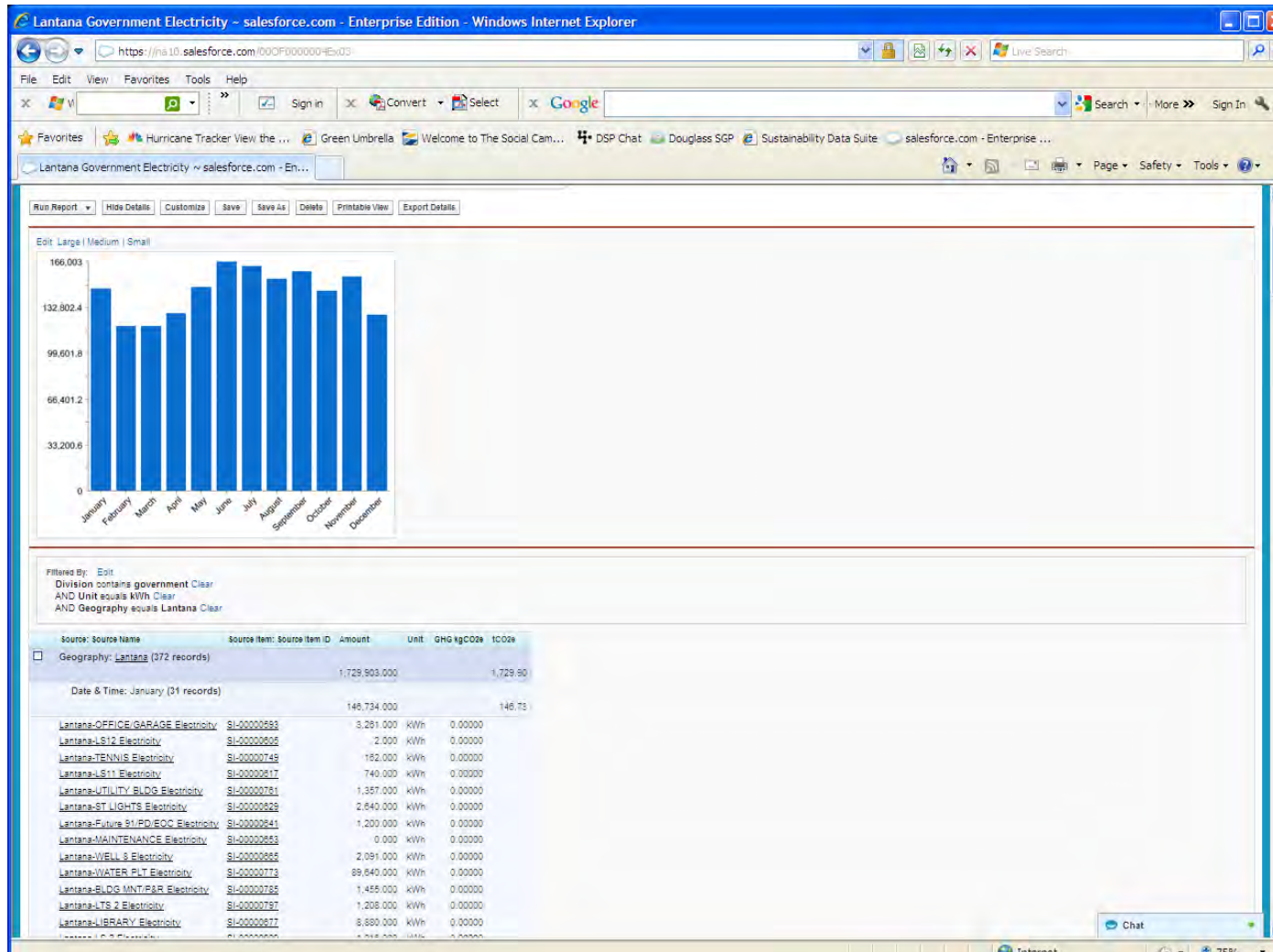
After: MECC Aggregate



After: Town of Lantana



Town of Lantana- Electricity Sources



Town of Lantana- Governmental Electricity Sources- Library

Source: Lantana-LIBRARY Electricity - salesforce.com - Enterprise Edition - Windows Internet Explorer

https://na10.salesforce.com/000000003KXKM

File Edit View Favorites Tools Help

Sign in Convert Select Google Search More Sign In

Source: Lantana-LIBRARY Electricity ~ salesforce.co...

cloudapps SustainabilitySuite Search Accounts, Leads, C... Janet Harrison Help & Training CloudApps Sustainability

Home Dashboards Reports Sources Disclosures Goals Performance Initiatives Administration

Create New... Back to List: Sources

Unresolved Items

Recent Items

- Lantana-LIBRARY Electricity
- MECC
- Don Blockel
- Community
- Atlanta
- Janet Harrison
- Courtney Bennett
- John Farnas

Recycle Bin

Source Detail

Source Name: Lantana-LIBRARY Electricity Organisation: MECC

Agreement: Do Not Disclose

Default Source Key: MECC-Elect-US-KVW-PRCC-2007__a

Description: account number 292901385

Meter Details

Supply Type: Core / Residual Meter Type: Fiscal meter

Core / Residual: MPAN Core Parent Meter: Lantana-Electricity-Government Operations

MPAN Core: MPAN Supplementary Provider: PP&L

Meter Serial Number: AMR: N/A (mandatory H+M)

Default Reading Type: Actual

Estimation Technique:

Category Information

Geography: Lantana Usage:

Division: Government Operations Asset:

Facility:

Supplementary Information

CCA: No ROCS / FIT: No

EU-ETS: No

Location Information

Street Address: 205 W. Ocean Avenue Country: US

Town / City: Lantana

County / State: FL Latitude:

Postal / Zip Code: 33462 Longitude:

System Information

Created By: MacKenzie Kaderabek, 9/10/2012 3:59 PM Last Modified By: MacKenzie Kaderabek, 9/10/2012 3:59 PM

Owner: MacKenzie Kaderabek [Change] Record Type: Electricity Metered Resources [Change]

Edit Delete Clone Multi Allocate

Go Source Inventories Max Known Inventory

Chat

Town of Lantana- Source Item List

Source: Lantana-LIBRARY Electricity ~ Salesforce.com - Enterprise Edition - Windows Internet Explorer

https://na10.salesforce.com/a0eP00000002CkQKM

File Edit View Favorites Tools Help

X W Sign in X Convert X Select X Google Search More >> Sign In

Favorites Hurricane Tracker View the ... Green Umbrella Welcome to The Social Cam... DSP Chat Douglass SGP Sustainability Data Suite salesforce.com - Enterprise ...

Source: Lantana-LIBRARY Electricity ~ salesforce.co...

Page Safety Tools ?

Supplementary Information

CCA EU-ETS No ROCs / FIT No

Location Information

Street Address 205 W. Ocean Avenue Country US
Town / City Lantana
County / State FL Latitude
Postal / Zip Code 33462 Longitude

System Information

Created By Mackenzie Kaderabek 9/10/2012 3:59 PM Last Modified By Mackenzie Kaderabek 9/10/2012 3:59 PM
Owner Mackenzie Kaderabek [Change] Record Type Electricity Metered Resources [Change]

Edit Delete Clone Multi Associate

Source Inventories New Source Inventory Source inventories help ?

No records to display.

Source Allocations New Source Allocation Source Allocations help ?

No records to display.

Source Items New Source Item Source items help ?

Action	Source item ID	Date & Time	Scope	Type	Subtype	Inventory Event	Amount	Unit	Total Cost	Posted to inventory
Edit Del	SI-0000000000	12/1/2010 12:00 AM	Scope 2	Electricity			8,600.000	kWh		No
Edit Del	SI-0000000001	11/1/2010 12:00 AM	Scope 2	Electricity			10,200.000	kWh		No
Edit Del	SI-0000000002	10/1/2010 12:00 AM	Scope 2	Electricity			10,380.000	kWh		No
Edit Del	SI-0000000003	9/1/2010 12:00 AM	Scope 2	Electricity			14,040.000	kWh		No
Edit Del	SI-0000000004	8/1/2010 12:00 AM	Scope 2	Electricity			14,520.000	kWh		No

Show 4 more » | Go to last (12) »

Child Sources New Source Child Sources help ?

No records to display.

Notes & Attachments New Note Attach File Notes & Attachments help ?

No records to display.

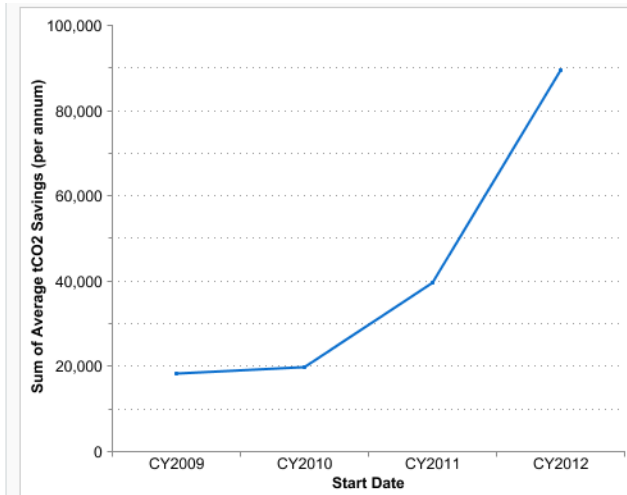
Back To Top Always show me more records per related list

Copyright © 2000-2012 salesforce.com, inc. All rights reserved. | Privacy Statement | Security Statement | Terms of Use | 508 Compliance

Chat

Sample Drill-down Report

Reduction Savings over Time



Initiative: Initiative Name	End Date	Average tCO2 Savings (per annum)	Average kWh Savings (per annum)	% Reduction/Increase Goal	Annual Benefit/Cost	Capital Cost	Initiative Status	Type
Start Date: CY2009 (2 records)								
Increase capacity of waste recycling at all facilities	4/16/2009	18,340.00	0	1.00%	-	-	Idea	Waste & Recycling
PC and Equipment Power Optimisation	4/16/2009	-	-	3.00%	-	-	Idea	Energy
Start Date: CY2010 (1 record)								
LED Refit across floors at HQ Facility	10/1/2010	1,500.00	0	10.00%	\$8,000	\$120,000	Completed	Energy
Start Date: CY2011 (3 records)								
Alternative Power Source for Data Centre	12/13/2012	10,000.00	0	12.00%	\$5,000	\$1,000,000	Idea	Energy
Light motion sensor implementation in underground parking facility	12/31/2011	7,500.00	-	2.00%	\$25,000	\$750,000	Completed	Energy
Install Heat Recovery Units for all Facilities	6/1/2012	2,390.00	-	10.00%	\$20,000	\$200,000	Live	Energy
Alternative Power Source for Data Centre	12/13/2012	10,000.00	-	12.00%	\$5,000	\$1,000,000	Idea	Energy
Light motion sensor implementation in underground parking facility	12/31/2011	7,500.00	-	2.00%	\$25,000	\$750,000	Completed	Energy
Install Heat Recovery Units for all Facilities	6/1/2012	2,390.00	-	10.00%	\$20,000	\$200,000	Live	Energy
Start Date: CY2012 (4 records)								
Data Centre Server Replacement with Cloud Services	4/4/2014	4,875.00	0	12.00%	\$62,500	\$500,000	Idea	Energy
Feasibility study for onsite power generation using waste @ Hospital Facility	10/1/2012	-	-	12.00%	-	-	Idea	Energy
Implement Sullto to reduce business travel emissions & costs	2/1/2011	30,000.00	-	15.00%	\$250,000	\$100,000	Approved	Environmental
Benchmarking study on emissions and energy consumption	4/1/2012	15,000.00	-	10.00%	\$5,000	\$15,000	Idea	Energy
Grand Totals (10 records)		89,605.00	0		\$375,500			

Detailed Reporting

Simplified Data Capture

https://c.na10.visual.force.com/apex/easycapture_edit

cloudapps SustainabilitySuite

EasyCapture Job

[Edit](#) [Submit](#) [Exit](#)

EasyCapture Job

EasyCapture Name: Aspen Court
Status: In Progress
Due Date: 25/03/2011
Instructions: Please provide energy, water and waste data for your facility.

EasyCapture Tasks

Description	Amount	Unit	Start Date	End Date	Reading Type	Total Cost	Cost Type	Additional Notes
Amount of waste sent to landfill	100.000	Tonnes (Metric 1000kg)	01/05/2011	31/05/2011	Actual	\$345.00	Actual	
Amount of waste recycled		Tonnes (Metric 1000kg)			Actual			
Water consumption		Cubic Metres (m3)			Actual			
Gas consumption		Kilowatt hours (kWh)			Actual			
Electricity consumption		Kilowatt hours (kWh)			Actual			

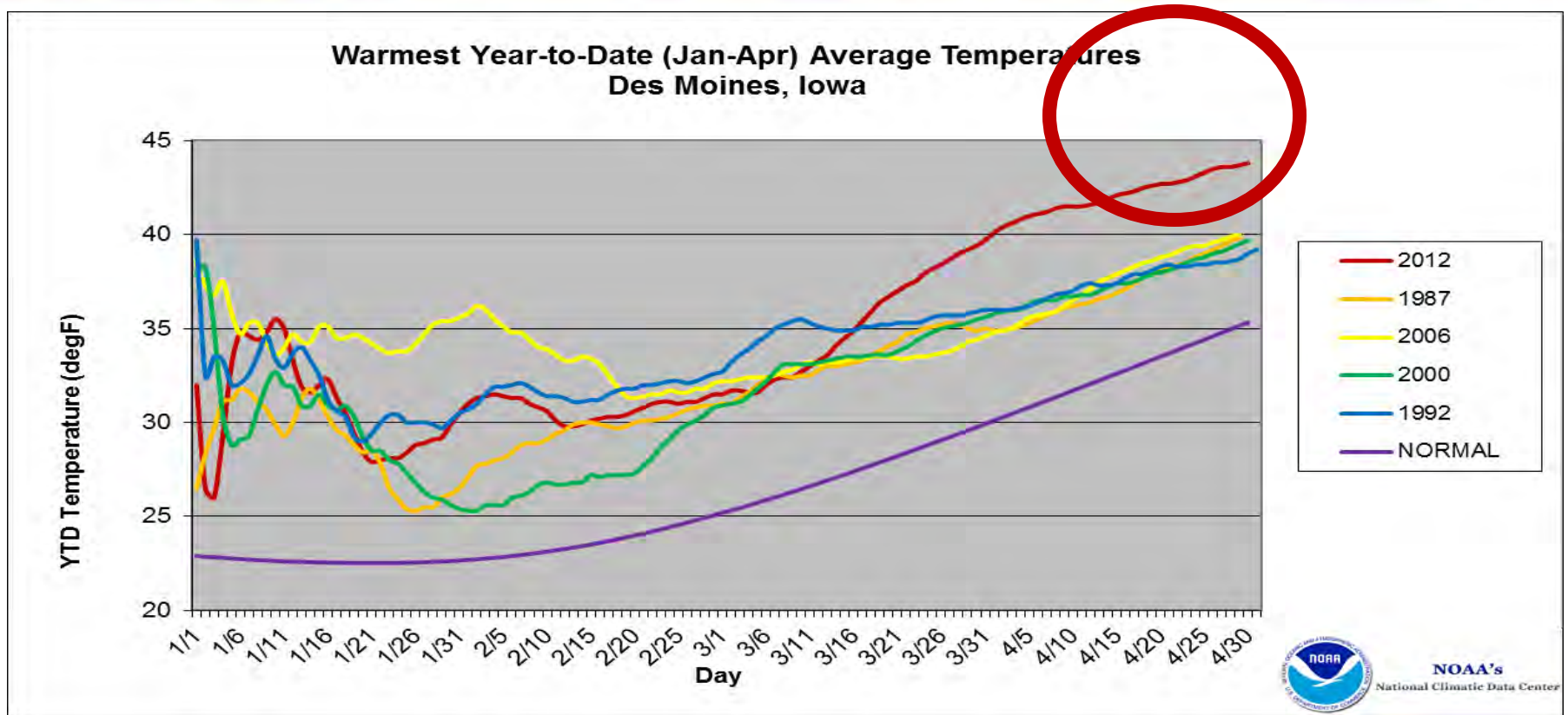
[Edit](#) [Submit](#) [Exit](#)

Getting Hot and Bothered About Climate Change

Erin L. Deady, Esq., AICP, LEED AP



Emissions & Climate Change



January-April 2012 was the **warmest** such period on record for the contiguous United States, with an average temperature of 45.4°F, 5.4°F above the long-term average.

State of the Climate-NOAA





“It’s getting hot in here,
so take off all your
clothes”
-Nelly



The Demand for Change



“He says he’ll only talk if you can assure him that those are energy efficient bulbs”

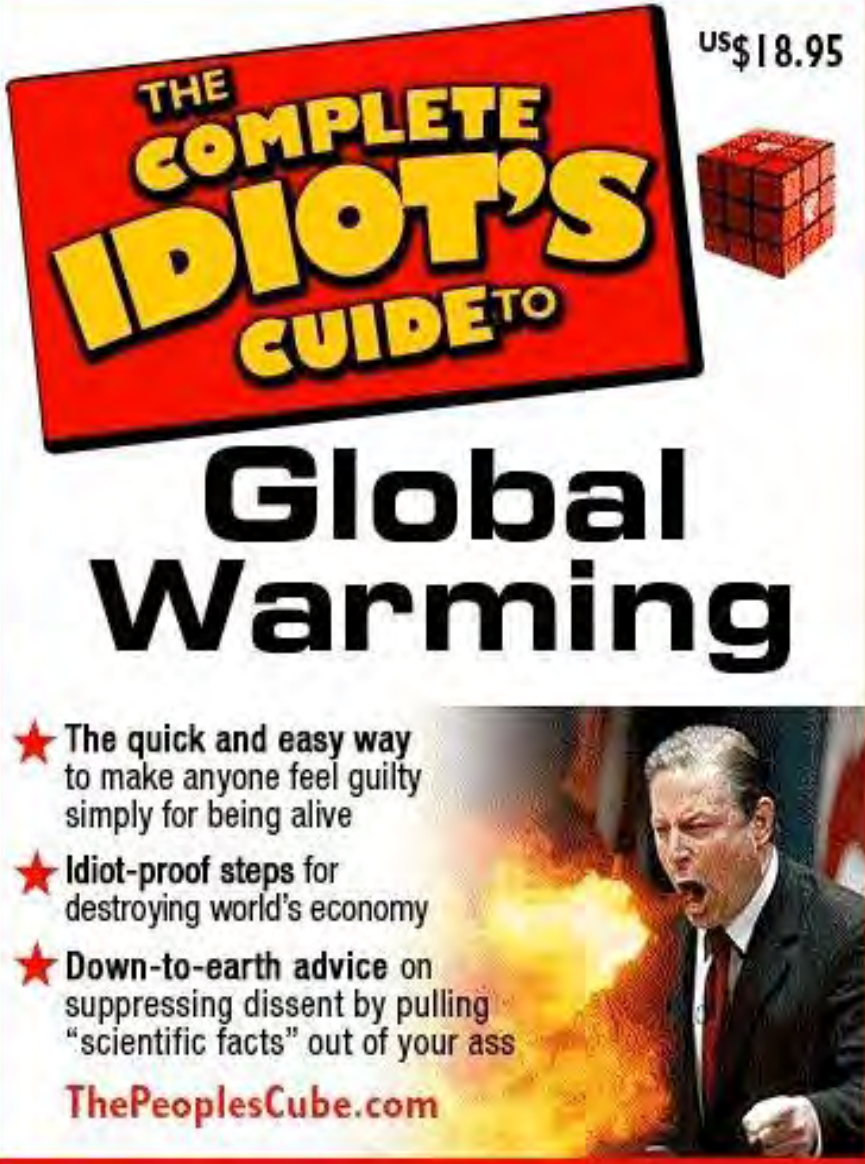
“...political resistance to climate change legislation may still be overwhelming. Yet the increasing number of self-regulatory actions by major multinational companies throw this conventional wisdom into question. Furthermore, they raise the ironic possibility that it will be corporate America that drags the U.S. government into the international system of greenhouse gas controls.

– Thomas P. Lyon



Part I

THE LAW ON SUSTAINABILITY, GHGS AND CLIMATE CHANGE



US\$18.95

**THE
COMPLETE
IDIOT'S
GUIDE TO**

**Global
Warming**

- ★ The quick and easy way to make anyone feel guilty simply for being alive
- ★ Idiot-proof steps for destroying world's economy
- ★ Down-to-earth advice on suppressing dissent by pulling "scientific facts" out of your ass

ThePeoplesCube.com





GHGEs, Climate Change → Response



2funnypictures.blogspot.com

- United Nations Framework Convention on Climate Change (UNFCCC) (1992) voluntary goal of reducing GHGEs from developed countries to 1990 levels by 2000
- Kyoto Protocol (1997) binding targets to reduce GHGEs 5.2% below 1990 levels by 2012
- Copenhagen Accord
- U.S. Response
 - Attempts @ legislation
 - Supreme Court → EPA has authority to regulate CO₂, reporting for sources emitting over 25,000 MTCO_{2e}
 - No legally-binding cap on GHGEs
- Regional / State / Local Government Responses (Planning, preparing and analyzing.....)



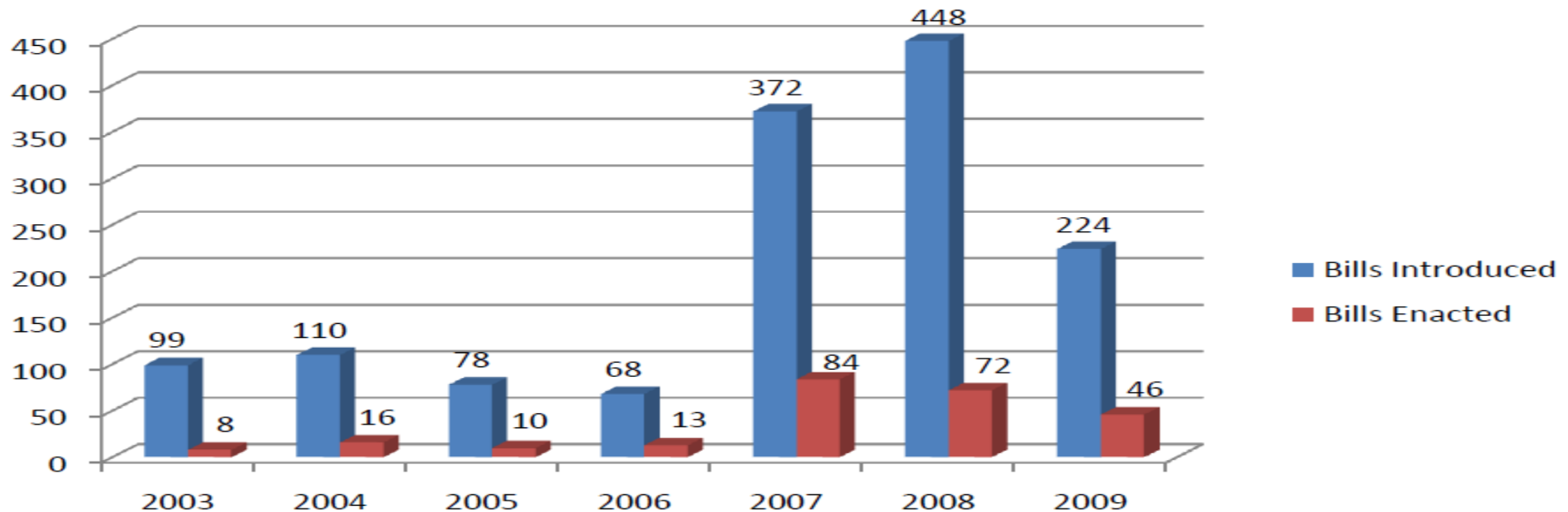
Where does Climate Change/Sustainability Show Up?

- ESA
- NEPA
- CAA
- CWA
- MMPA
- FOIA/1st Amendment
- Energy Policy Act
- Global Climate Change Research Act
- Corporate Reporting/Securities Disclosure
- FTC
- “Cap-and-trade”: regulation where GHGE’s are capped and allocated through the distribution of “allowances” representing a right to emit.
- Regulate vehicle standards
- Regulate activities (public and private) (New EPA Rules: Emit no more than 1,000 pounds of carbon dioxide per megawatt-hour of energy produced)
- Green & Energy Building/Codes (New Mexico case)
- As of October 2011 there were 461 active cases



State Efforts at GHG Policy

GHG Regulating Bills in the States



Source: American Legislative Exchange Council, *Greenhouse Gas Regulation in the States*. The 2009 data does not include subsidies for carbon capture and sequestration.

Thru 2012:

- CA, OR & WA = specific legislative actions to control GHGs
- AZ, FL, IL, MI, MO and NC have articulated actionable policies
- 27 States have general policy statements acknowledging the need to address the contribution of land use and buildings to GHG emissions.
- 15 States = No Action yet.



FL Legal Influences On Climate Change, Energy & Sustainability

- **State of Florida:**

- Reduction of emissions to 2000 levels by 2017, to 1990 levels by 2025, and by 80% of 1990 levels by 2050.
- Florida adopted the California motor vehicle emission standards (22% reduction in vehicle emissions by 2012 and a 30% reduction by 2016).
- Building Efficiencies/Code, Chapter 553, F.S. increasing standards
- HB 7123: Model Green Building Code (2007)
- HB 697 (GHG reduction strategies in local government's Comprehensive Plan. *Some* requirements recently eliminated.
- HB 7135 (State and Local Government Buildings "greener")
- HB 7179 (PACE)
- HB 7117 (New Energy Bill)



ADAM H. PUTNAM
COMMISSIONER



Florida's Law: How Far Does it Go?

- “Appropriate” and “professionally accepted” data (science on GHG emissions and climate change?)
- “Use ecological planning principles and assumptions in the determination of the suitability of permitted development.”
- Sprawl (VIII) plan or plan amendment allows for land use patterns or timing which disproportionately increase the cost in time, money, and energy of providing and maintaining facilities and services, including roads, potable water?
- ... discourage the proliferation of sprawl if it incorporates a development pattern or urban form that achieves four (4) or more of the following.... (IV) promotes conservation of water and energy.
- Conservation element must contain principles, guidelines and standards for conservation that provide long term goals to protect air quality ...
- CHHAs and AAAs?



Part II

WHY SHOULD YOU CARE?



Comer v. Murphy Oil I & II



- March 20, 2012, *Comer v. Murphy Oil USA, Inc.*, a lawsuit by various Mississippi property owners against numerous oil, coal, and chemical companies seeking tort liability for climate change, was dismissed x2.
- Refiled lawsuit is barred by the doctrines of res judicata and collateral estoppel. Political question.
- Federal nuisance claims involving GHGEs are displaced by the CAA
- The court concluded that *Comer II* raises essentially the same claims as *Comer I*, and the plaintiffs are not entitled to another bite at the apple.
- Likely will be appealed to 5th Circuit



Kivalina & Steadfast- Who is going to move the native Alaskan Tribe and does the insurance carrier have to defend the claim?

- Nuisance claim for \$ from the energy industry for flooding damage caused by climate change.
- Case currently on appeal in 9th Circuit
- “...if an individual driving a car (and thus contributing to emissions) could also be a defendant, and if so, how a court could determine who was liable”? - CAUSATION
- Steadfast had no duty under the CGL policies issued by it to defend its insured, AES Corp., against climate change/global warming-based causes of action (Vacated, Rehearing and Reaffirmed 4/20/12)
- Steadfast: did the damage result from an “occurrence”? Answer: No (x2)
- “If an insured **knew or should have known** that certain results would follow from his acts or omissions, there is no 'occurrence' within the meaning of a CGL policy...”



Kivalina, Alaska



Pay Attention !

- *In re Katrina Canal Breaches Consolidated Litigation* (Robinson), 647 F. Supp.2d 644 (E.D. La. 2009).
- 400+ plaintiffs sued to recover for Katrina-related damages and the Corps' mismanagement of the Mississippi River Gulf Outlet or MRGO.
- 7 of these plaintiffs (the "Robinson plaintiffs") went to trial. Plaintiff's win, Corps appeals to 5th Circuit and loses. No sovereign immunity, data was there & Corps was negligent (grossly).
 - No defense under Flood Control Act (no safe haven)
 - No exception under Federal Tort Claims Act (Corps did nothing to protect against storm surge effect)
 - Should have updated EIS under NEPA ** Ongoing obligation under NEPA to consider adapting to a changing climate **
 - Negligence (this could attach to privately constructed structures too)
- Scientific data "foreseeable" ie; sea level rise?
- Just under \$720,000 awarded to 5 plaintiffs



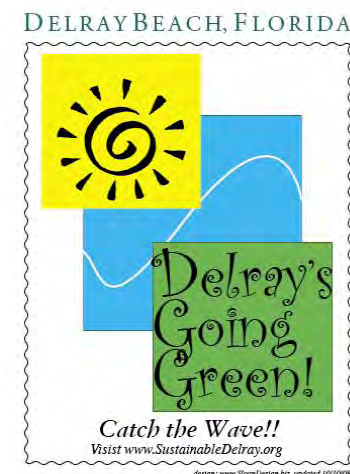
Local Government Liability

- Duty to maintain roads? (Jordan et al v. St. Johns County)
- Is an “energy sucking” desalination plant okay or should we conserve water (Surfrider Foundation v. California Coastal Commission)
- Should we keep renourishing beaches and what is obligation to property owner? (Stop the Beach Renourishment, Inc. v. FDEP-no taking when renourishment occurred)
- Panther litigation – ESA and habitat protection (Sierra v. USFWS)



Local Government Strategies on GHGs and Climate Planning

- Local governments are on the front lines
- Financial implications, nearest level to constituency who is beginning to accept the reality & control of the “purse”
- Develop data (GHG Inventory/Energy Audits)
- Create strategic approach: Reduce GHG emissions and energy use in government operations and community-wide
- Individual efforts: cities & counties
- Partnered approach: **Case Study: Municipal Energy Conservation Collaborative (Plan July 2012)**
- Fund Plan through better decisions in existing policy structures, energy savings, energy performance contracting, grants and other means
- Implement approach through Comprehensive Plan and Local Code



Energy/Greenhouse Gas Management Approaches

- **Energy** only (Buildings and fleet)
- **Sustainability** (Energy, waste management, transportation and other “sustainability” Focus Areas)
- **Climate Action Plan** (Climate Change impacts and adaptation strategies)
- No right or wrong approach: Any Plan can address elements of all approaches



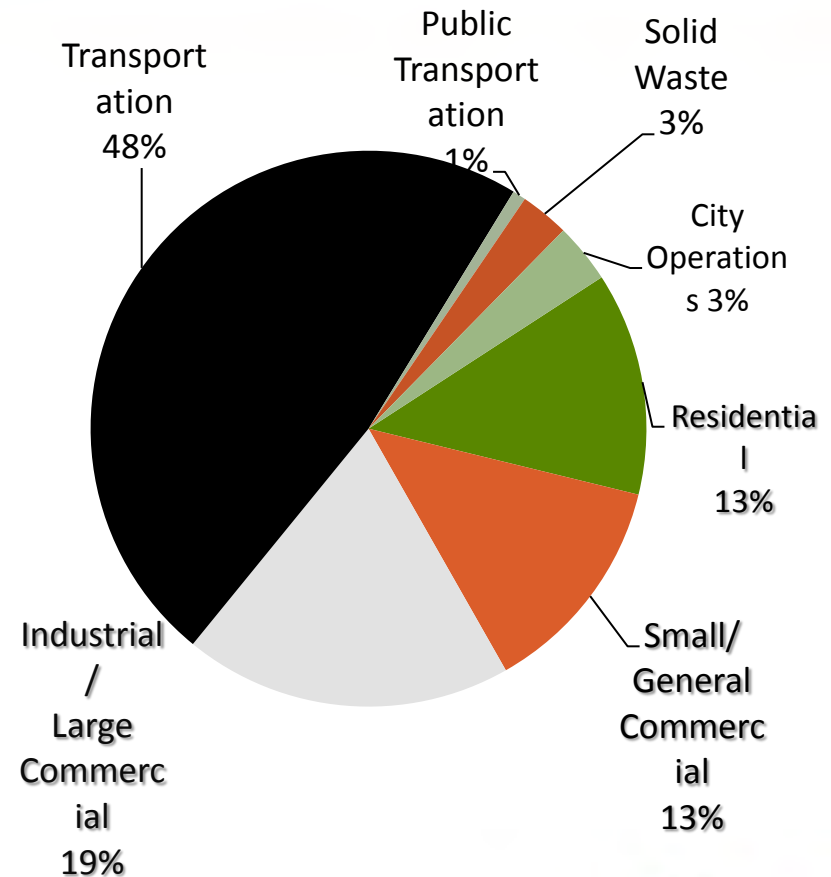
What is PACE?

Property Assessed
Clean Energy
(\$\$\$/Repayment
through assessment)

What/who started it?
Cisco

Where is it happening?
24+ states

Why should you care?
Buildings and “tekkie”



Florida's PACE law: Section 163.08, F.S.



- 2010 (most state laws passed 2009-present)
- SB 2322 / HB 7179 (approaches).
- Allows local governments to finance "qualifying improvements" on properties/structures.
- Energy efficiency, renewable energy installations or improvements to increase storm resistance.
- Linkage between retrofits on existing building stock and "compelling state interest" (critical).
- Republican led, unanimous support in FL Legislature.
- WATER CONSERVATION PROJECTS!



Have a Sense of Humor

**We Can't Hold On
Much Longer!**

Hurry!

**Energy Rebates Available
Now Through April 2012***

* Pre-approval required. Restrictions apply. Rebate availability
contingent upon availability of limited funding.



For more information visit:

ENERGY²SAVE.NET

**Monthly Electric Bill
Got Your Attention?**

**Multiple Energy Rebates Available
for Residents, Businesses, HOAs,
and Condo Associations**



For more information visit:

ENERGY²SAVE.NET

or call

1.888.283.7720

Hurry! Offer expires soon!

The
options
are
really
not
that
funny...



**What will move
you to
change,
act
and
do your part?**





Sustainability Indicators

Florida APA Conference
September 14, 2012

Kim Lundgren

Overview

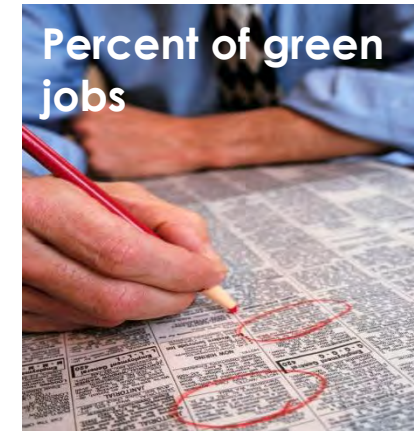
- Definitions – what is a sustainability indicator?
- Importance of sustainability indicators
- Example Indicators
- Sustainability Indicators and the Florida Municipal Energy Conservation Coalition
- Summary

Definitions

What is a Sustainability Indicator?

Indicator (*noun*)

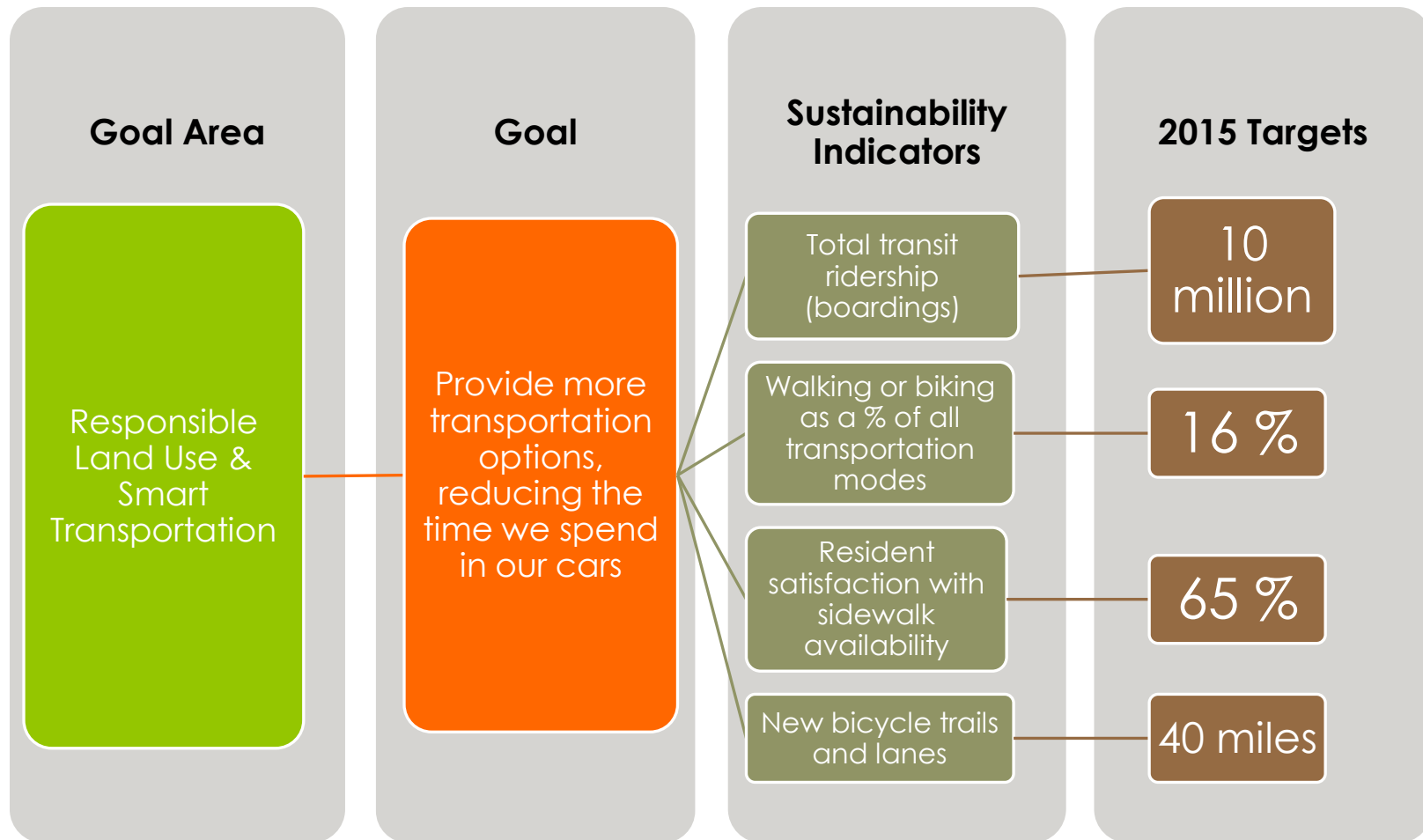
- A thing that indicates the state or level of something (Oxford Dictionary)
- A **sustainability indicator** indicates the state of a metric that tracks progress towards sustainability- ultimately these are holistic in scope



Related Terms

- **Sustainability Goal**– an aim or desired result
- **Sustainability Target** –a target aims to achieve a measurable change in a baseline sustainability indicator by a pre-determined target year
- **Sustainability Initiative** – A specific strategy or action a community can take to help achieve a goal or target.
- **Sustainability indicators help show progress towards meeting a goal**

Example: Miami-Dade County GreenPrint



Why Sustainability Indicators are Important

Importance of Sustainability Indicators

- Allows you to track progress towards goal
- Provides supporting data to prove an initiative is working
- Helps create a definition of sustainability

Example Sustainability Indicators

Examples from communities at the forefront of sustainability planning and reporting

Miami-Dade County, FL Sustainability Scorecard

 Responsible Land Use and Smart Transportation	
• Use our land wisely, creating and connecting strong sustainable neighborhoods	
Performance Measures	2015 Target
Urban center area plans	15
Multi-corridor master plans	6
Transit-oriented developments	4
Enhanced bus corridors	4
Park and ride lots	6
Park and open spaces accessibility metrics	Develop
• Provide more transportation options, reducing the time we spend in our cars	
Performance Measures	2015 Target
Total transit ridership (boardings)	10 million
Walking or bicycling trips as a percent of all transportation modes	16 percent
Resident satisfaction with sidewalk availability	65 percent
New bicycle trails and lanes	40 miles

- Image Source: GreenPrint Sustainability Scorecard, <http://www.miamidade.gov/greenprint/pdf/scorecard.pdf>

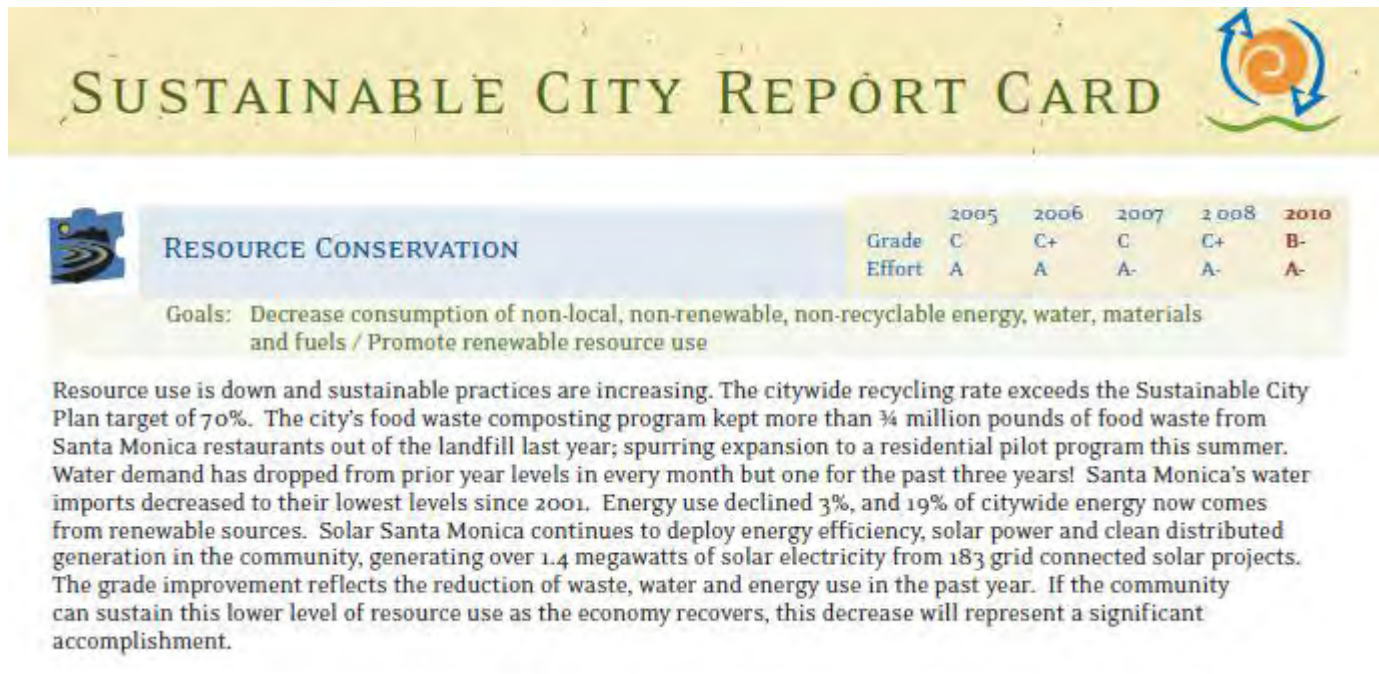
New York City, NY PlaNYC Progress Report 2012

CATEGORY	METRIC	2030 TARGET	FIGURE FOR MOST RECENT YEAR	TREND SINCE BASE YEAR
HOUSING AND NEIGHBORHOODS	Create homes for almost a million more New Yorkers while making housing and neighborhoods more affordable and sustainable			
	Increase in new housing units since January, 2007	314,000	122,969 ₁	↗
	Total units of housing in NYC	INCREASE	3,352,041 ₁	↗
	% of housing affordable to median-income NYC household	INCREASE	60.0% ₁	↘
	Vacancy rate of least expensive rental apartments	INCREASE	1.0% ₁	↗
	% of new units within a 1/2 mile of transit	>70%	85.5% ₁	NEUTRAL
	Residential building energy use per capita (source MMBTU) (3 yr rolling avg)	DECREASE	49.3 ₂	NEUTRAL
PARKS AND PUBLIC SPACE	Ensure all New Yorkers live within a 10-minute walk of a park			
	% of New Yorkers that live within a 1/4 mile of a park	85%	75.6% ₁	↗
BROWNFIELDS	Clean up all contaminated land in New York City			
	Number of vacant tax lots presumed to be contaminated	DECREASE	1,500 – 2,000 ₁	NEUTRAL
	Number of tax lots remediated in NYC annually through the Brownfield Cleanup Program	INCREASE	0 ₁	NEUTRAL

Table Source: PlaNYC Progress Report 2012, http://nytelecom.vo.llnwd.net/o15/agencies/planyc2030/pdf/PlaNYC_Progress_Report_2012_Web.pdf

Santa Monica, CA

2010 Sustainable City Report Card



- Image Source: Sustainable City Report Card, 2010, http://www.smgov.net/uploadedFiles/Departments/OSE/Categories/Sustainability/Sustainable_City_Report_Card_2010.pdf

Philadelphia, PA

Greenworks 2012 Progress Report

TARGET 4: Purchase and Generate 20 Percent of Electricity Used in Philadelphia from Alternative Energy Sources

METRICS

- **Greenworks Baseline (2008)**

2.3% Alternative Energy

- **Current (2011)**

12.2% Alternative Energy

- **2015 Target**

20% Alternative Energy

- The percentage of electricity generated using alternative energy is one sustainability indicator tracked by the City on an annual basis

Florida Municipal Energy Conservation Consortium Sustainability Project

Florida MECC Project

- Atlantis, Ocean Ridge, Haverhill, Lantana, and Palm Beach Shores
 - Regional sustainability plan
 - Sustainability baseline indicators
 - GHG inventories, energy audits, and implementation of Audit recommendations
- Energy Efficiency Conservation Block Grant Funded

MECC Sustainability Indicators

- Baseline year 2010
- Sustainability plan was framework for Indicators
- Separate indicators for municipal operations and the community

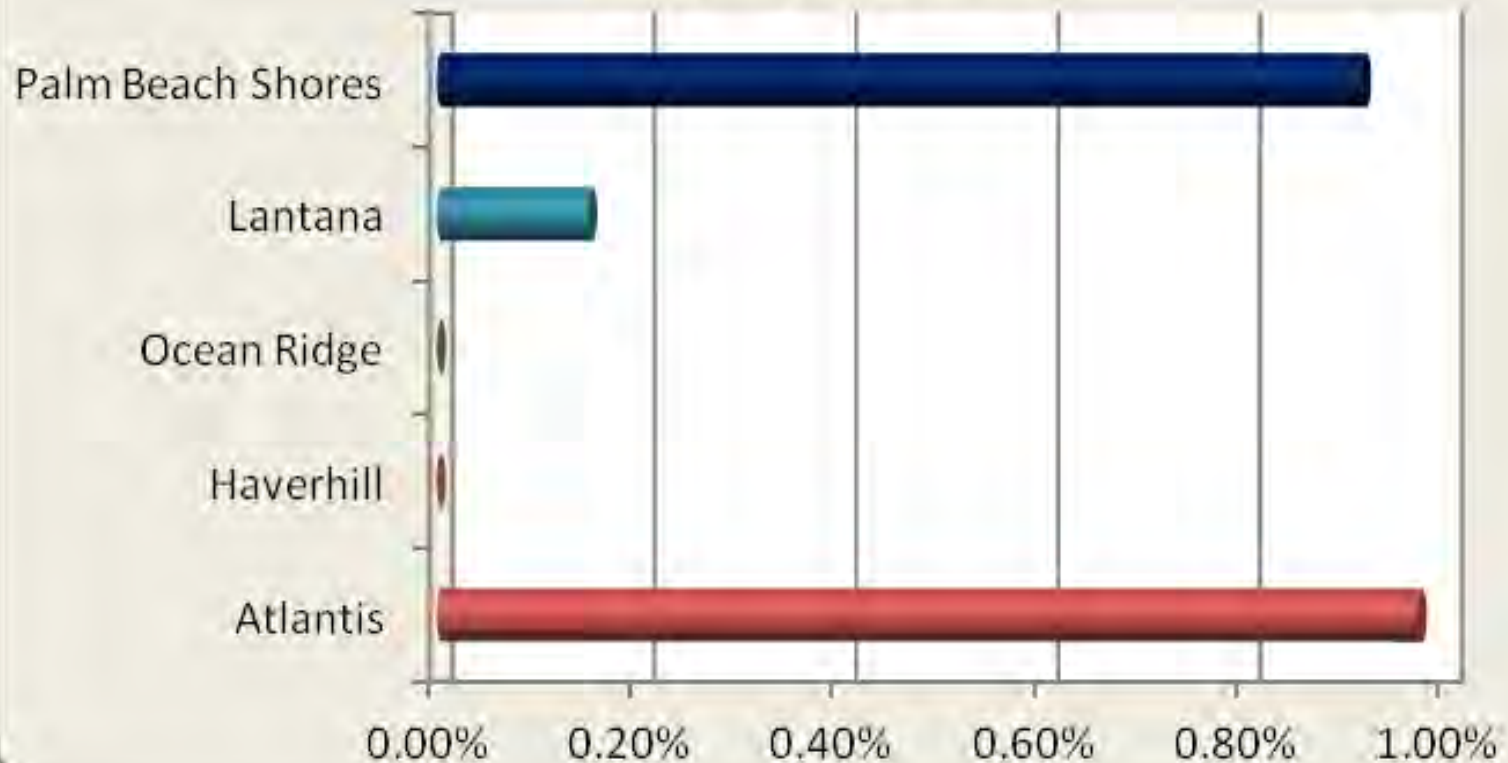
Community Sustainability Indicators

Community Sustainability Metrics	Unit
GHG Emissions and Energy	
GHG Emissions per Capita	Metric Tons CO ₂ e/ population
Community electricity use (commercial, residential, industrial)	MWh
Community GHG Emissions	Metric Tons CO ₂ e
Solid Waste	
Recycling rate	Percent
Tons of waste recycled	Tonnage
Tons of waste composted	Tonnage
Community waste tonnage - disposed of in a landfill or waste-to-energy facility	Tonnage
Transportation	
Annual Vehicle Miles Traveled	Miles
% of population carpooling to work	Percent
% of population biking to work	Percent
Transit ridership	Annual Weekday Ridership
Transit ridership	Average Weekday Ridership
Transit ridership	Number of Bus Routes
Water	
Community water use	Gallons
Public Engagement	
Number of website visitors	Number

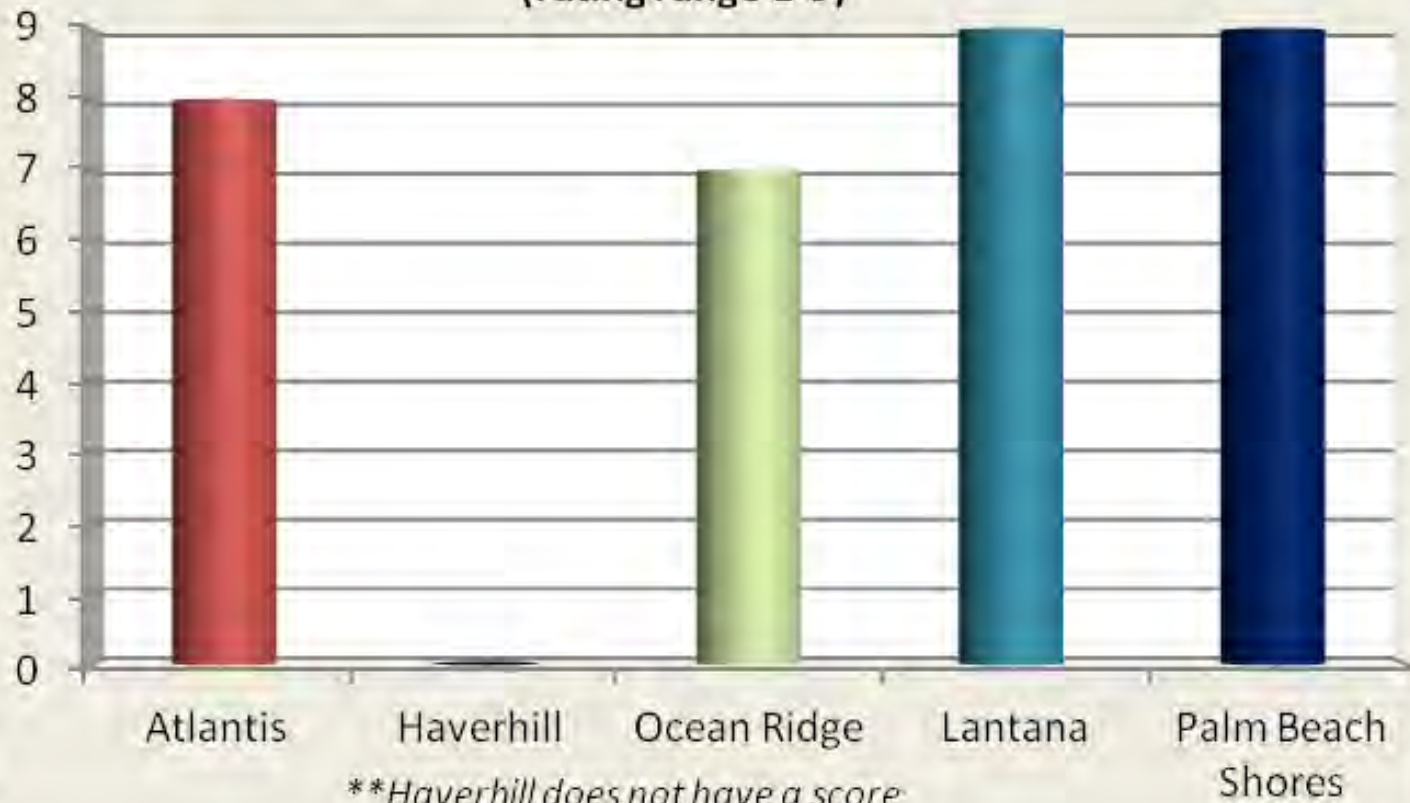
Municipal Sustainability Indicators

Municipal Sustainability Metrics		Unit
Building GHG Emissions and Energy Use		
Municipal building GHG emissions		Metric Tons CO ₂ e
Municipal energy use		MWh
Number of cool roofs in the municipal government		Number
PV installed capacity		kW
% of energy audit recommendations implemented		Percent
Adopted an environmentally preferable purchasing policy		yes/no
Fleet Vehicles		
Municipal fleet GHG emissions		Metric Tons CO ₂ e
Number of hybrid or alternative fuel fleet vehicles		%
Fuel use - gasoline		Gallons
Fuel use - diesel		Gallons
Bicycle and Pedestrian Infrastructure		
Has a bike / ped plan or committee		Yes/No
Miles of bike lanes		Miles
Miles of bike paths		Miles
Miles of bike routes		Miles
Miles of sidewalks		Miles
Land Use, Planning, and Policy		
Land area under of mixed used zoning in city/town		Percent
Number of trees planted		Number
% area in open space or conservation land		Percent
Establishment of a Green Enterprise zone or energy economic zone		Yes/No
FEMA Community Rating Systems Score		# 1-9
Established an internal green team		Yes/No
FL Green Local Government		Yes/No
Water		
Municipal water use		Gallons

Percent of Population Biking to Work (each municipality is less than 1%)



FEMA Community Rating Score (rating range 1-9)



Keys to Success

Keys to Success

- ◉ Just get started
- ◉ Define sustainability
- ◉ Set a target or find a basis of comparison
- ◉ Select indicators where data is available, but don't be afraid to create new sources of data
- ◉ Report your progress annually

Questions?

Kim Lundgren

Director of Sustainability

VHB-MillerSellen

klundgren#@vhb.com