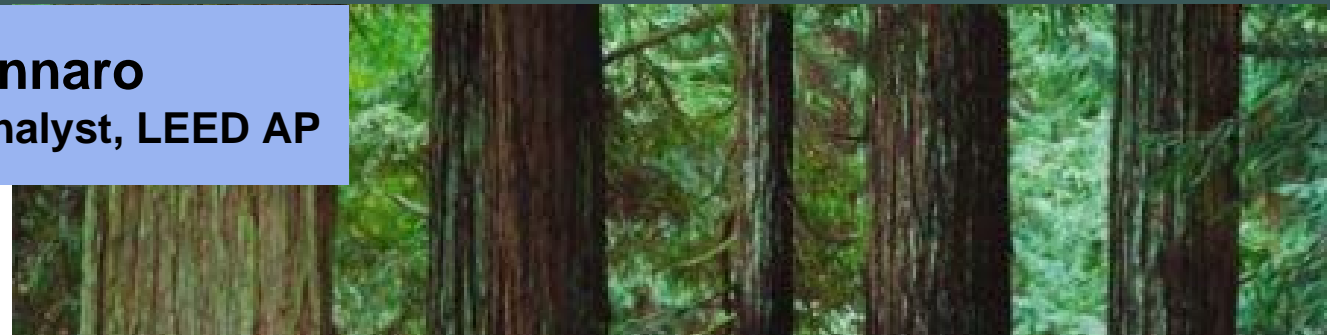




Reducing GHG Emissions: One Ton at a Time

Melissa DeGennaro
Environmental Analyst, LEED AP



ACE Group of Companies

ACE is a global leader in insurance and reinsurance conducting business in more than 50 countries and employing over 16,000 people worldwide.

“ I don’t think there is any greater issue confronting mankind than global warming, and we have to come to terms with how human activity may be accelerating changes in the environment. If every one of us commits to reducing emissions and lessening our company’s impact on the environment, we can accomplish amazing things.”

— *ACE Limited Chairman & CEO Evan Greenberg*



ACE and Climate Leaders

- **Joined EPA Climate Leaders in June 2007**
- **Completed 2006 base year inventory December 2007**
- **Completed 2007 inventory June 2008**
- **Developed GHG reduction strategy August 2008**



Choosing our Boundaries

In 2007 ACE had 183 locations worldwide, of which:

- 17 were owned
- 94 were leased with direct electrical meter
- 72 were leased without direct electrical meter

Despite the number of non-metered spaces, ACE has elected to use the Operational Control Approach.



Operational Control Approach

Under this approach, **Direct Stationary** and **Indirect** emissions are included for all locations where ACE holds a deed or lease.

Also included are the following **Direct Mobile Emissions**:

- owned/leased vehicle fleet
- owned/leased corporate jets

ACE's Optional Emissions:

U.S./Bermuda business travel

Non-U.S. locations direct and indirect emissions

Non-U.S. owned/leased fleet



GHG Inventory Summary

	Emission Source	2006 GHG Emissions (tCO2e)	% of Inventory	2007 GHG Emissions (tCO2e)	% Change from Base Year
US	Owned Buildings	10,204	19.2%	10,362	1.5%
	Leased metered Buildings	2,162	4.1%	2,257	4.4%
	Leased non-metered Buildings	6,559	12.3%	6,559	0.0%
	Mobile Combustion	7,351	13.8%	6,035	-17.9%
	Refrigerant	170	0.3%	170	0.0%
	Business Travel (w/Bermuda)	7,644	14.4%	8,085	5.8%
Non-US	Owned Buildings	4,258	8.0%	4,873	14.4%
	Leased metered Buildings	10,950	20.6%	11,133	1.7%
	Leased non-metered Buildings	2,290	4.3%	2,290	0.0%
	Mobile Combustion	1,404	2.6%	1,404	0.0%
	Refrigerant	149	0.3%	149	0.0%
Total		53,141	100.0%	53,317	0.3%
Full Time Equivalent Employees		9,976		10,396	4.2%
Normalized Emissions (kgCO2e per employee)		5,327		5,129	-3.7%



Assessing our GHG Inventory

Approximately **40% of ACE's carbon footprint** is from leased office space, most of which is located in multi-tenant buildings.

Challenges:

- Not all spaces have separate meters (allocation of consumption by landlord)
- Minimal or diluted return on facility improvements
- Most leases are only 5 years



Assessing our GHG Inventory

ACE chose to focus on spaces it controls and has prioritized improvements in the following areas:

- 1. Owned Facilities (28%)**
- 2. U.S. Vehicle Fleet (3%)**
- 3. U.S./Bermuda Business Travel (10%)**
- 4. Real Estate Management**



Owned Facility Management Strategy

In addition to conducting site audits, facility managers at ACE's largest owned facilities were asked to identify potential GHG reducing projects.

Several projects were identified that **BOTH** reduce GHG emissions and have direct economic benefits.

Example Projects	Annual GHG Emission Reductions (metric tons CO ₂ e)	ROI
VSD fans – Philadelphia office	137	37%
CFL lighting upgrade - ACE Conference Center	66	30%
Lighting retrofit – Bermuda office	266	31%
HVAC improvements – Wilmington office	136	42%



U.S. Vehicle Fleet Strategy

With input from fleet consultants PHH and the Environmental Defense Fund, ACE has a goal of achieving a 30 mpg fleet average by 2012.

This will potentially reduce GHG emissions by 470 metric tons CO₂e.

Strategy may include:

- Moving from 6 to 4 cylinder cars
- Utilizing some hybrids
- Switching from SUV's to crossover vehicles
- Providing incentives for employees who choose the more environmentally friendly options



U.S./Bermuda Business Travel

Installation of video/audio/web conferencing equipment and a revised travel policy encouraging virtual meetings is expected to help reduce commercial airline business travel by 5% by 2012.

Reductions will also be driven through budgeting processes.

Achieving a 5% reduction from 2006 GHG emission levels would result in saving approximately **400 metric tons CO₂e!**



Real Estate Strategy



ACE is aiming to reduce GHG emissions by reducing real estate square footage.

Vacating underutilized locations while optimizing other spaces to accommodate more work stations are two ways ACE will show an **organic decline and reduce emissions.**



But what about space ACE leases?

In general, GHG reducing opportunities are limited at leased sites because they require significant capital improvements to facility systems.

ACE has chosen to focus on:

1. Lighting opportunities
2. Office equipment upgrades
3. Thermostat settings
4. Employee education (ACE Green)

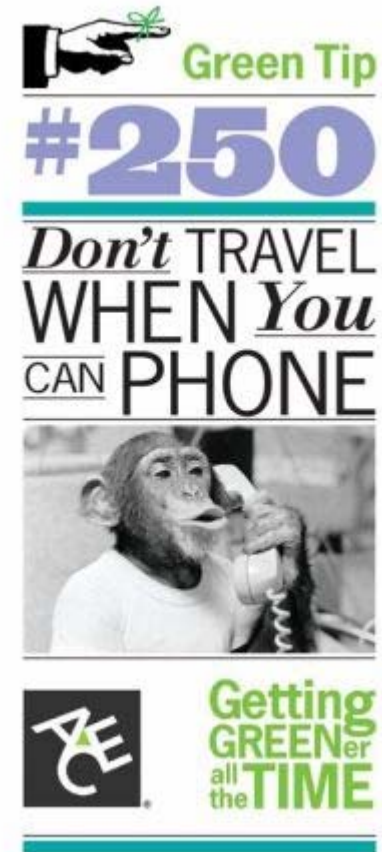


ACE Green

ACE Green is an internal **environmental education program** through which each office has created a Green Committee.

Each committee is responsible for promoting **environmentally friendly employee habits** and identifying environmental initiatives specific to their office.

Educational tools such as an **internal website and posters**, created and available to all ACE employees.



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ACE Green

I don't think there is any greater issue confronting mankind than global warming, and we have to come to terms with how human activity may be accelerating changes in the environment. But ACE has 10,000 people around the globe. If every one of us commits to reducing emissions and lessening our company's impact on the environment, we can accomplish amazing things.

— ACE Limited Chairman & CEO Evan Greenberg

ACE Green

ACE Green, the company's global employee environmental program, was launched in the fall of 2007 and ACE offices around the world have formed environmental committees to lead the way in fulfilling the company's pledge: "Getting GREENER all the TIME."

Reducing energy consumption is central to safeguarding the environment, and energy reduction practices such as turning off electronics and lighting that are not in use, and switching fax and copy machines to the "energy save" mode have now become the norm in most ACE offices.

Most ACE Green initiatives fall within four broad categories: energy consumption, water conservation, waste reduction, and employee education/community outreach. The approaches and tactics used often vary from office to office, but each program is tailored to address their office's specific needs.

In order to recognize the progress and achievements of these committees, ACE has launched an ACE Green Competition through which the committees have the opportunity to share their greening initiatives for the chance to win \$25,000.00. The winner will be chosen live during the second quarter employee video conference in August.

As the committees compete, each Thursday ACE Connect will feature stories highlighting ACE Green initiatives from offices around the world as a way to share what others are doing to make ACE a greener place.

If you have any green ideas or comments or are interested in joining your local ACE Green committee, please email ACEGreen@ace-ina.com.

Other ACE Initiatives

- [Climate Leaders](#)
- [ClimateWise](#)
- [LEED-FB Certification](#)
- Major Recycling Programs (Coming Soon)

Join the Discussion

Read and contribute ideas and opinions on ACE and its role in environmental change. [More >](#)



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GREENER
all the
TIME

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Green Fact
#027

For every passenger mile traveled

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Defining ACE's Strategy

ACE views its strategy as one that is fluid and constantly changing.

Each day, new opportunities are identified in the field, new technologies becomes available and new employee enthusiasm is shown.

Thus, ACE's strategy is to stick with it and reduce GHG emissions, one project at a time, one ton at a time!

