

Carbon What?

Seminar Notes

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Submitted to

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Region 4

Submitted by

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Introduction

On June 17, 2009, the Environmental Protection Agency (EPA) Region 4, in partnership with the Green Foodservice Alliance (GFA), and the Sustainability Division of the Georgia Department of Natural Resources, hosted the *Carbon What?* Seminar at the Atlanta Community Food Bank (ACFB) in Atlanta, GA. The agenda is included in *Attachment A*. The seminar included attendees from the hospitality industry. The purpose of the seminar was to provide participants with resources and information on carbon emissions and their environmental impact.

Holly Elmore, Founder and Executive Director, Green Foodservice Alliance, thanked attendees for participating in the *Carbon What?* Seminar. She stated that the seminar was designed to explain:

- *How carbon impacts the environment*
- *How carbon is generated*
- *What is a carbon footprint?*
- *How to calculate a carbon footprint*
- *What are carbon credits?*
- *How to generate carbon credits*
- *How to purchase carbon credits (if needed)*

Atlanta Community Food Bank

Rob Johnson, Chief Operating Officer, Atlanta Community Food Bank (ACFB) welcomed the attendees to the ACFB center. He stated that the core purpose of the ACFB is the collection and distribution of food while also engaging, educating and empowering the community to fight hunger. Mr. Johnson offered the attendees a tour of the ACFB center at the end of the seminar. Mr. Johnson also noted that the ACFB is approaching its 30th year anniversary.

US Foodservice Discussion on Internal Practices

Ed Graham, US Foodservice Chairperson of Corporate Responsibility and Sustainability, highlighted key efforts that the US Foodservice has achieved on lowering their carbon footprint. Mr. Graham stated that US Foodservices has achieved a waste reduction of 55%, an 18% decrease in energy consumption and a 2% decrease in fuel consumption. In 2007 to 2008, electricity, natural gas and diesel use decreased with a 64% reduction in natural gas usage. Mr. Graham stated that capital investments were not used to achieve the reductions and since 2007 US Foodservices has reduced their utility invoices by over \$135,000.

Jessica Rose, Account Executive for Royal Cup Coffee, commented on how Royal Cup Coffee lowers its carbon footprint, is certified organic and a member of the Rainforest Alliance. She stated that the roasting process for the coffee beans utilizes afterburners to reduce carbon impact. Ms. Rose added that Royal Cup Coffee works with local ports and uses four cylinder delivery vehicles to further lower their carbon footprint.

Carbon 101: How Carbon is Generated and Used in Nature

Mary Beth VanPelt, Environmental Scientist for the Environmental Protection Agency (EPA), explained the basics of carbon dioxide generation and utilization. Ms. VanPelt stated that carbon dioxide is a greenhouse gas that is a necessary component of the atmosphere. Through carbon producing sources like fossil fuels and vehicle emissions, the carbon level in our atmosphere has increased. Ms. VanPelt suggested that composting should be considered instead of using landfills, which produce methane gas that is 21 times more toxic to the atmosphere than carbon dioxide.

Impact of Other Greenhouse Gases Generated by the Foodservice Industry

Roy Edwards, Sustainability Division of the Georgia Department of Natural Resources, opened with the division's mission statement— to reduce the impact of Georgia businesses and institutions on the environment by partnering with them to reduce waste and conserve our natural resources. Mr. Edwards highlighted some key points of the services provided:

- Technical assistance, training and tools
- Free, confidential services that are available to any organization in the state of Georgia
- Leadership through the Partnership for a Sustainable Georgia (http://www.p2ad.org/documents/pp_home.html)

Mr. Edwards discussed the six major greenhouse gases and their impact on the atmosphere over 100-year period:

1. **Carbon Dioxide:** Produced by fossil fuel combustion, deforestation, and industrial processes.
2. **Methane:** Produced from livestock emissions, incomplete combustion of biomass, leakage from natural gas transportation and delivery systems, coal mining and decay of organic wastes in landfills. Methane is 21 times more potent than carbon dioxide.
3. **Nitrous Oxide:** Released from cultivating soil, use of nitrogen-based fertilizers, production of nylon and burning fossil fuel and wood. Nitrous oxide is 310 times more potent than carbon dioxide.
4. **Hydrofluorocarbons:** Produced from the manufacturing of refrigerators, is a propellant in aerosol cans and air conditioners. Hydro fluorocarbons are 11,700 times more potent than carbon dioxide.
5. **Perfluorocarbons:** Produced from aluminum production, manufacturing of computer chips and other semiconductors. Per fluorocarbons are 6,900-9,200 times more potent than carbon dioxide.
6. **Sulphur Hexafluoride:** Produced from the installation, servicing and disposal of equipment such as circuit breakers, insulated substations and

switchgears and in the production of magnesium. Sulphur Hexafluoride is 23,000 times more potent than carbon dioxide.

Mr. Edwards directed the attendees to the Georgia Department of Natural Resources web site (www.gadnr.com) for tool kits and materials on recycling, partnership information, and other environmental resources.

Computing a Foodservice Operator's Carbon Footprint

Chris Coan, Gas South General Manager, Business and Government Markets, provided a presentation on carbon footprints, defined as the amount of carbon dioxide (or carbon dioxide equivalents) emitted while performing daily routines. Mr. Coan stated that a company or individual's carbon footprint can be calculated from various sources— home, airline flights, businesses, and meals. Mr. Coan suggested that becoming carbon neutral should be the goal for reducing a carbon footprint. Carbon neutral is being able to maintain an equal balance between carbon outputs and carbon being sequestered or offset. Mr. Coan addressed some key contributors that make up a carbon footprint at home and business:

Home

- Electricity use: how the electricity was generated.
- Natural gas use: how natural gas was generated.
- Household generated waste: where the waste goes after it leaves the home.
- Transportation: where and how much one drives.

Business

- Electricity use: how the electricity was generated.
- Natural gas use: how natural gas was generated.
- Business generated waste: where the waste goes after it leaves the business.
- Transportation: the distribution vehicles, company cars, etc.
- Procurement practices: how/where office supplies, furniture, etc. are procured.
- Restaurant menu: how food is distributed, where, etc.

Mr. Coan demonstrated to the attendees how one can offset their carbon footprint by using the *Gas South Household Carbon Emissions Calculator* (see *Attachment B*). The calculator takes the household carbon inputs and translates it to how many trees (one tree eliminates 1.25 tons of carbon dioxide from the air) are needed to be planted to equal a carbon neutral household.

Mr. Coan described how a menu can have a major impact on a restaurant's carbon footprint. Mr. Coan directed the attendees to www.eatlowcarbon.com where individuals can utilize the websites *Low Carbon Calculator* to help in the reduction of carbon emissions from certain foods.

Carbon Credits: What are They, How are They Generated, How & Why are They Purchased?

Eric Taub, CEO and Managing Partner of Verus Carbon Neutral, described how the market trades for carbon dioxide, which also represents all six of the greenhouse gases. Mr. Taub explained how carbon credits are used in a cap and trade operation. Mr. Taub explained that by using this system, Verus Carbon Neutral, provides a service which helps clients maintain or achieve a carbon neutral status. Mr. Taub explained that Verus Carbon Neutral will work with the client to place a limit on greenhouse gas emissions while setting a required annual reduction goal. Mr. Taub added that when companies reach their goal they may bank or sell any extra offsets. If a company does not reach their goal they must purchase offsets.

One carbon offset is equal to the reduction of one metric ton of carbon dioxide or its equivalent in other greenhouse gases. Mr. Taub added that an offset project is defined as being a project that sequesters or eliminates the creation of greenhouse gases. These carbon offsets and project offsets are being traded similarly to stocks.

Mr. Taub noted that the Chicago Climate Exchange (CCX) which operates North America's only cap and trade system for all greenhouse gases, with global affiliates and projects worldwide. The CCX achieves its carbon reductions by entering into a legally binding compliance regime, providing independent, third-party verification for its members. Mr. Taub commented that this is beneficial to offset a carbon footprint and discussed the benefits of implementing this type of program, including the increased value, and motivation of employees via participation in "green" events. He also added that offsetting a carbon footprint can also improve government entity relationships and help with building awareness for climate change.

Foodservice Industry Case Studies

Randy Childers, Senior Director of Engineering for Hyatt Regency, explained how the Hyatt Regency has reduced their energy consumption and energy conservation efforts. Highlights from the discussion include:

- Installation of more efficient heating, ventilating and air conditioning (HVAC) units in guestrooms.
- Extensive use of energy saving compact fluorescent (CF) and high definition (HID) lighting.
- Use of energy efficient motors.
- Reconfiguration of chilled water systems for maximum efficiency.
- Outsourcing laundry to a energy-efficient laundry service providers.

Mr. Childers noted that Hyatt has reduced their energy consumption by 37% since 2000 as a result of making energy efficient choices. Mr. Childers also added that they have achieved a reduction in greenhouse gas emissions by 6,400 metric tons per year.

Mr. Childers explained how the Hyatt Regency manages some challenges in water conservation. Mr. Childers stated that the Hyatt generates around 171 gallons of water per guest night and noted that Atlanta, GA has the highest water/sewer rate in the nation. Mr. Childers offered some highlights on how the Hyatt Regency helps to conserve water usage, including:

- Installation of low-flow shower heads, faucets, and toilets in guestrooms
- Minimal exterior landscaping, eliminating seasonal flowers, and using mulch to retard evaporation.
- Outsourcing laundry to a water efficient facility.

Through these efforts, Mr. Childers stated that the Hyatt has successfully managed to save 23 million gallons of water annually and saved \$298,000 for 2008. Mr. Childers noted recycling has yielded a projected a net savings of \$6,000 per year. In addition, Mr. Childers stated that all left over consumable food is donated to the ACFB.

The Food Bank's Carbon Impact

Rob Johnson, Chief Operating Officer, Atlanta Community Food Bank commented on the challenges the ACFB has on lowering its carbon footprint. The ACFB is a non-profit organization that depends on individual and company donations. Mr. Johnson noted that one company that donated their navigation software to the ACFB. This software has helped the ACFB to reduce its emissions by creating faster and more fuel efficient routes for deliveries and pick ups. Mr. Johnson also commented that the ACFB is exploring other ways that they can lower their carbon footprint, including a can-crushing machine that can turn damaged unusable food cans into recyclable materials.

Mr. Johnson encouraged attendees to add their names to the ACFB e-newsletter sign-up sheets located on their tables. He added that the ACFB's facilities are available for meetings, especially for groups that focus on sustainability. He also reminded attendees that a tour of the Food Bank would take place immediately following the seminar.

Question and Answer Session

Ms. Elmore thanked the attendees and speakers for being a part of the *Carbon What?* Seminar and opened the floor to a question and answer session.

Q: What does one carbon dioxide point represent?

A: A carbon dioxide point is equal to one metric ton of carbon dioxide.

Q: How much carbon was generated for this meeting?

A: An estimate would be around 25-30 tons of carbon dioxide.

Q: What methods are used to capture British Thermal Units (BTUs)?

A: There are some plants that can capture BTUs.

Q: Is the Hyatt Corporation using the Hyatt Regency as a model?

A: The Hyatt Corporation as always been mindful of energy consumption, and recycling efforts. The Hyatt Corporation has hired Brigitta Witt, Vice President of Environmental Affairs, to assist with this effort.

Q: What is the life expectancy of a low- flow toilet?

A: The life expectancy of a low- flow toilet is 12 years.

Q: Did the Hyatt Regency provide training to employees on recycling food waste?

A: Yes. Training was provided, however the transition was easy.

Q: How is recycling done in the Hyatt Regency guestrooms?

A: There are recycle bins in each guest rooms. The guests are encouraged to utilize these bins.

Q: How does the Hyatt Regency handle the inherent design of the open space architecture?

A: It is a challenge; however, we are looking at ways to save in future developments.

Closing/Next Steps

Ms. Elmore thanked attendees for their participation and stated that suggestions for future seminars should be emailed to holly@greenfoodservicealliance.org.

Ms. Elmore asked attendees to highlight any future events. The events are as follows:

- Day of week September 2-3, 2009 The Green Business Expo at the Cobb Galleria <http://www.greenbusinessworksexpo.net/>
- Day of week October 12, 2009 Department of Agriculture at the Freight Room Downtown
- Day of week November 14-15, 2009 Enviro Expo USA at the Georgia World Congress Center
- State-wide campaign on recycling- funded by the Georgia Department of Community Affairs, Office of Environmental Management: www.yougottabekidding.org

Ms. Elmore offered her thanks to ACFB for donating the meeting space and reminded attendees about the bins for recyclable and compostable items. She expressed her appreciation to the attendees for their enthusiasm and for making a difference.

Attachments

Attachment A: Agenda

Attachment B: Gas South Household Carbon Emissions Calculator

Attachment A
Agenda

CARBON WHAT?
06-17-09 Seminar Agenda

- 8:30 - 9:00 a.m. Registration and Continental Breakfast
- 9:00 - 9:05 a.m. Welcome ~ Holly Elmore, Green Foodservice Alliance
- 9:05 – 9:10 a.m. Welcome ~ Rob Johnson, Atlanta Community Food Bank
- 9:10 – 9:15. a.m. US Foodservice Discussion on Internal Green Practices ~ Ed Graham, Chairperson of Corporate Responsibility & Sustainability Committee
- 9:15 – 9:25 a.m. Carbon 101 ~ How carbon is generated and used in nature ~ Mary Beth Van Pelt, U.S. EPA
- 9:25 – 9:35 a.m. Impact of Other Greenhouse Gases Generated by the Foodservice Industry ~ Roy Edwards, Sustainability Division of the Georgia Department of Natural Resources
- 9:35 – 9:55 a.m. Computing a Foodservice Operator's Carbon Footprint ~ Chris Coan, Gas South
- 9:55 – 10:15 a.m. Carbon Credits ~ what are they, how are they generated, how & why purchased ~ Eric Taub, Verus Carbon Neutral
- 10:15 – 10:25 a.m. Foodservice Industry Case Studies:
- Randy Childers, Hyatt Regency
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- 10:25 – 10:40 a.m. Questions & General Discussion
- 10:40 – 10:45 p.m. Atlanta Community Food Bank's Carbon Impact ~ Rob Johnson
- 11:00 p.m. Food Bank Tour

Thank you for attending the seminar!

Attachment B
Gas South Household Carbon Emissions Calculator