



**MEETING CUSTOMER EXPECTATIONS  
TO DISCLOSE GREEN HOUSE GAS  
EMISSIONS.**

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# Greenhouse Gas Reporting

## Meeting Customer Expectations

ASSBT Biennial Meeting

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# Climate Change Overview

- Google Search on “Climate Change”
  - 44.1 million hits
- U.S Universities hosted a National “Teach-In” on Global Warming
- Green Energy Gaining Traction
- Key Element of Sustainability Initiatives at all Levels, including Industry

# Industry Greenhouse Gas Reporting

## ● Voluntary

- Promoted by various government and non-government organizations
- Adopted by industries pursuing sustainability policies

## ● Mandatory

- State Initiatives (Western Climate Initiative)
- Federal (EPA - Only a matter of time)

# Western Climate Initiative

- Coalition of selected US States (11) and Canadian Provinces
- Develop model and consistent reporting rules
- Linked to The Climate Registry (TCR)
- Oregon adopted GHG reporting rules in October 2008
- Rules currently being expanded and detailed by the coalition

# Climate Change

## Idaho Approach

- Idaho has not joined the WCI
- 2007 Governor's Executive Order
  - Acknowledges increasing trend of GHG in atmosphere
  - Expresses concern about environmental and economic impact
  - Directs IDEQ to take a leadership role in developing a GHG inventory and reduction strategy

# GHG Reporting Platforms

## ● The Climate Registry

- Collaboration of governments in North America
- Provide common data infrastructure and consistency
- Accommodate voluntary and mandatory reporting
- Promote full disclosure of GHG emissions and supporting documentation

# GHG Reporting Platforms (cont.)

## ● Carbon Disclosure Project (CDP)

- Claims largest database of climate change information in the world
- Oriented to institutional investors, purchasing organizations & government bodies
- “Voluntary” reporting
- Conducts annual survey
- 2008 was 6<sup>th</sup> reporting cycle (3<sup>rd</sup> in U.S.)



# Carbon Disclosure Project 2008 Participants

- 3M
- AFLAC
- Alcoa
- Anheuser-Busch
- Apple
- Black & Decker
- Boeing
- Caterpillar
- Chevron
- Coca Cola
- Costco
- Duke Energy
- Eli Lilly
- Ford
- General Mills
- Kellogg
- Kraft Foods
- McDonalds
- Monsanto
- Wal-Mart
- Wrigley

# CDP Supply Chain Program

- Commenced in 2007
- Supply chain emissions may exceed those of the purchasing company's own operations
- Accounts for emissions from a company's supply chain

# GHG Reporting Tools Endorsed by CDP

## ● Greenhouse Gas Protocol

- Maintains tools to understand, quantify, and manage GHG emissions
- Facilitates consistency between reporting entities
- Used by GHG accounting groups including TCR & CDP (Endorsed by ISO)
- Affiliated with the World Resources Institute and World Business Council for Sustainable Development

# PepsiCo Carbon Disclosure Questionnaire (CDP-SCLC08)

- TASC0 notified by PepsiCo in September 2008
- Decision to participate was voluntary, but PepsiCo strongly encouraged
- PepsiCo requested TASC0 complete the CDP 2008 Supply Chain Leadership Collaboration questionnaire
- PepsiCo's minimum expectation was for supplier to register on the CDP

# PepsiCo GHG Questionnaire

## ● Sections of Questionnaire

1. Risks and Opportunities (Narrative)
2. Accounting of Emissions (Annual GHG Inventory)
3. Performance Targets
4. Governance (Narrative)
5. Scope 1 & 2 Emissions Split by Business Category
6. Your Engagement with Your Suppliers (Narrative)
7. Product Life Cycle (Narrative)
8. Feedback (Narrative)

# PepsiCo Questionnaire

## Minimum vs. Comprehensive

- Each section has one or both types of questions
- All participants were asked to respond to the “minimum standard” questions
- Answering highlighted “comprehensive answer” questions was considered a more sophisticated response

# Example Narrative Questions

- How is your company exposed to risks related to climate change?
- How is your company managing risks?
- Does your company have a GHG emissions reduction plan in place?
- What activities are your undertaking to reduce emissions?
- Do you have a strategy to engage suppliers?

# GHG Emissions Inventory

- Questionnaire references procedures and tools available on the GHG Protocol website
- GHG emissions to count both direct (Scope 1) and indirect (Scope 2 and 3) sources



# Scope 1 Direct Emissions

- Generation of electricity, heat, or steam
- Physical or chemical processing
- Transportation of materials, products, waste, and employees
- Fugitive emissions

# Scope 2 and 3 Emissions

## ● Indirect Emissions

- Scope 2: From generation of purchased electricity
- Scope 3: Other indirect emissions
  - Optional
  - Extraction and production of purchased materials
  - Transport-related activities
  - Electricity-related activities not in Scope 2
  - Leased assets and outsourced activities
  - Waste disposal

# Estimating GHG's

- What GHG are counted
  - Consistent with Kyoto Protocol
    - Carbon Dioxide (CO<sub>2</sub>)
    - Methane (CH<sub>4</sub>)
    - Nitrous Oxide (N<sub>2</sub>O)
    - Hydrofluorocarbons (HFC)
    - Perfluorocarbons (PFC)
    - Sulfur Hexafluoride (SF<sub>6</sub>)
- Use GHG Protocol tools

# GHG Protocol Tools

- Include both guidance and worksheets
- Worksheets populated with emission factors and formulas
- Cross sector tools
  - Stationary combustion
  - Purchased electricity, heat or steam
  - Transport and mobile sources
  - Employee travel and commuting
- Sector specific tools

# Completing the SCLC Survey

- Typical of emission inventory
- First time responders were asked to provide:
  - Current year data
  - Plus data for previous 3 years
- Gathering and organizing data for multiple facilities and years presented a logistics challenge

# Completing the SCLC Survey (continued)

- Tools enable reporting all GHG emissions in terms of carbon equivalents
- In addition to data many SCLC questions required narrative response
- Reporting deadline was October 31 (2 months from commencing)

# TASCO GHG Emissions Inventory

## Section 2

### ● Scope 1 Direct Emissions

- Includes four manufacturing facilities
- Boilers, kilns, and material transport
- Total for 2006-07: 1,011,000 metric tons

### ● Scope 2 Indirect Emissions

- Purchased electricity: 98 MWh
- Total for 2006-07: 41 metric tons

# Quality Assurance

- QA is important enough that CDP encourages independent verification by outside consultant



# TASCO Feedback

- Suggest that a new section be added to the questionnaire
- Atmosphere sinks of CO<sub>2</sub>
- Quantify consumption of CO<sub>2</sub> by agricultural crops

# Sugar Beet Crop

## CO<sub>2</sub> Consumption

|           |   |                                      |
|-----------|---|--------------------------------------|
| 17        | = | % sugar                              |
| 5         | = | % marc                               |
| 40        | = | Carbohydrates carbon content         |
| 0.323     | - | Tons CO <sub>2</sub> per ton beet    |
| 5,000,000 | = | Tons beets growth                    |
| 1,600,000 | = | Tons CO <sub>2</sub> consumed        |
| 1,450,000 | = | Metric tons CO <sub>2</sub> consumed |

# GHG Reporting

- Voluntary reporting required this year
- Mandatory reporting likely in the near future

# 2006 US Greenhouse Gas Inventory <sup>a</sup>

| Source                 | % of Total |
|------------------------|------------|
| Electricity Generation | 38.9       |
| Transportation         | 31.0       |
| Industrial             | 14.4       |
| Residential            | 5.5        |
| Commercial             | 3.5        |
| Other                  | 6.7        |
| Total                  | 100        |

<sup>a</sup> US EPA