

# Responsible Care® Management Systems & the Inclusion of GHG Requirements

Randy Block

Kestrel Management Services, LLC

March 25, 2010



# Business Value of a GHG Inventory

---

- ▶ Understand long term business risks as new climate legislation is being developed
- ▶ Identifying opportunities to reduce costs (the link to energy)
- ▶ Competitive advantage
- ▶ Assists in long-term planning to navigate in a carbon constrained world
- ▶ Customer inquiries
- ▶ Metric for achieving corporate sustainability goals



# Headlines

---

- ▶ “My presidency will mark a new chapter in America’s leadership on climate change that will strengthen our security and create millions of new jobs in the process,” Mr. Obama said. *(November 18, 2008)*
- ▶ Obama Pick of Carol Browner as Energy Czar will put Focus on Alternative Energy  
*(Phoenix Business Journal – December 16, 2008)*
- ▶ WASHINGTON (Reuters) - U.S. Rep. Henry Waxman, a California liberal, won the chairmanship of a key congressional energy committee on Thursday and promised to work closely with President-elect Barack Obama to promote alternative energy, ease global warming and expand healthcare.  
*(November 20, 2008)*



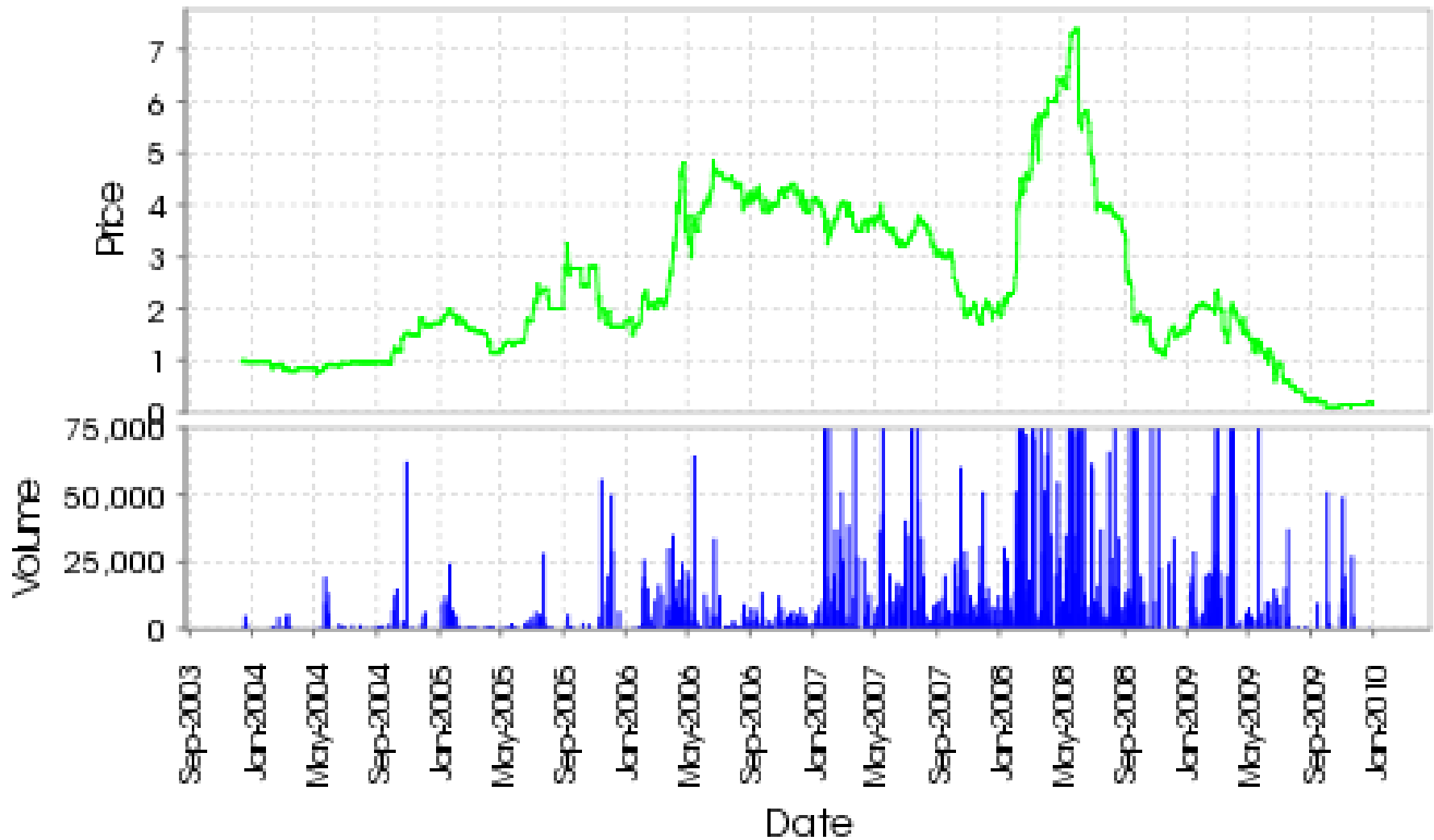
# Government Programs

---

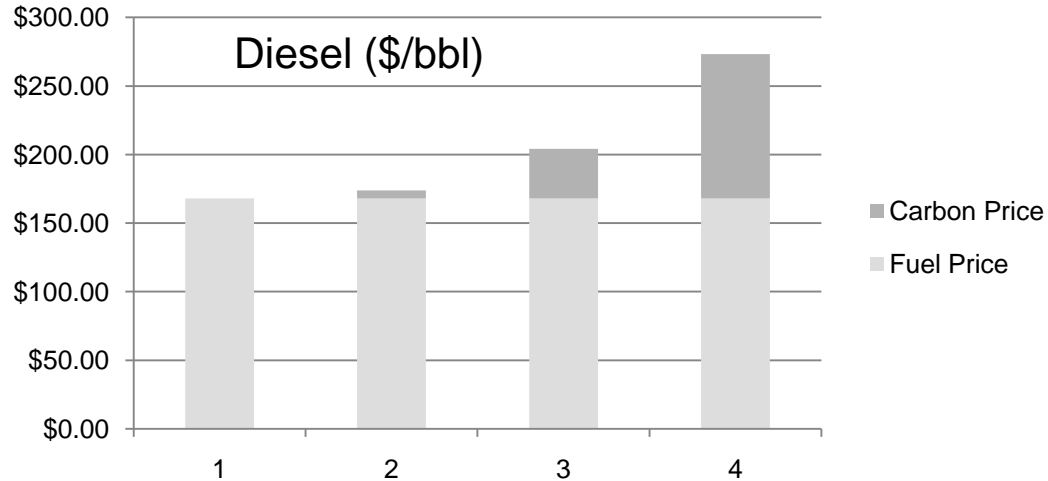
- ▶ USEPA - Endangerment Finding- Ms. Jackson
- ▶ USEPA - Rule Requiring GHG Inventories
- ▶ GHG reporting will be required for year 2010
- ▶ Jan 2011 Title V Air Permit required if emitting over 75,000 tons GHG
- ▶ State or Regional Programs
  - Northeast Regional Greenhouse Gas Initiative
  - Western Climate Initiative
  - Midwest Greenhouse Gas Reduction Accord (IA, IL, KS, MI, MN, WI and Manitoba)
- ▶ Senator Boxer Proposal (80% by 2050 --- EPA to establish cap/trade program)



# CCX Carbon Financial Instrument (CFI) Contracts Daily Report



# Example Financial Impacts on Diesel and Electricity



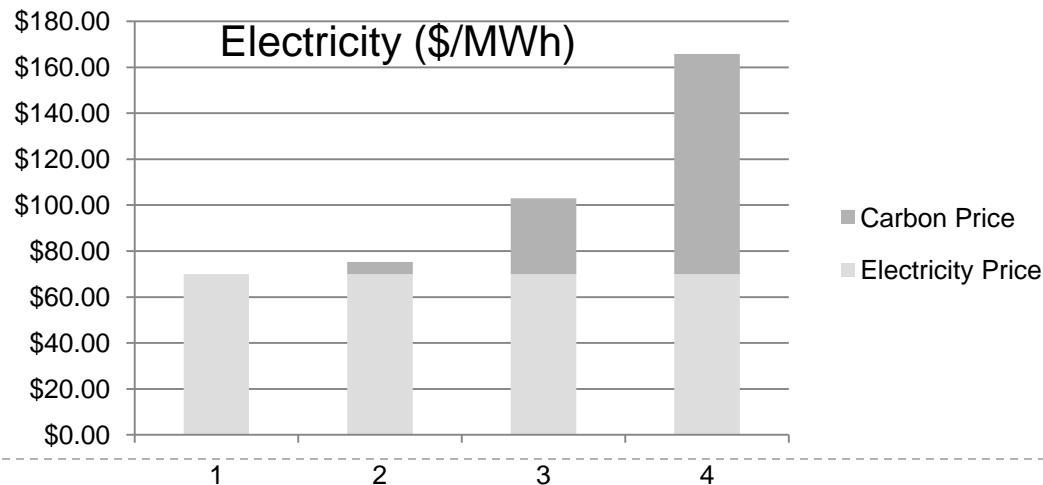
## Conditions:

1- Baseline No Carbon Market and Diesel at \$4 per gallon & Electricity at 7 cents/kwHr

2-CCX today

3-CCX at European values

4-CCX at predicted European values



# Impact of Carbon Price Signals

---

- ▶ Conclusion:  
“The effects of re-pricing of Carbon will be profound”
- ▶ There will be winners and losers in a carbon-constrained future – how will your organization fare in the face of such enterprise risks?
  - ▶ Your GHG footprint? Method to estimate? Validate/replicate?
  - ▶ Policies, procedures and practices suitable?
  - ▶ Control of your operations? Your supply chain?
  - ▶ Forward looking plans, goals and preparations?
  - ▶ Organizational roles and responsibilities?

# Responsible Care Management System Basics for GHG

---

- ▶ The Responsible Care Management System as designed will allow an organization to meet these new challenges
- ▶ Identify GHG as environmental aspects/impacts
- ▶ Method to track and be knowledgeable on new legal requirements
- ▶ Setting of Objectives and Targets
- ▶ Identification of Roles and Responsibilities
- ▶ Training and Awareness
- ▶ Communication
- ▶ Operational Control



# Responsible Care Management System Basics for GHG

---

- ▶ Monitoring and Measurement
- ▶ Evaluation of Compliance
- ▶ Corrective/Preventive Action program
- ▶ Records program
- ▶ Internal Audit program
- ▶ Management Review



# Responsible Care Management System Basics for GHG

---

- ▶ All of the requirements for the RCMS will be needed to insure and assure the GHG initiative will be viewed holistically by an organization and institutionalized in a manner that benefits the organization regardless of the final outcome of the regulations



# The Greenhouse Gases

Green House Gas	Potency or Equivalent Factor (GWP) *
Carbon Dioxide (CO <sub>2</sub> )	1
Nitrous Oxide (N <sub>2</sub> O)	21
Methane (CH <sub>4</sub> )	310
Perfluorocarbons (PFCs)**	7000
Hydrofluorocarbons (HFCs)**	11700
Sulfur Hexafluoride (SF <sub>6</sub> )	23900

\* Based on the 100 year global warming potential (GWP)

\*\* Compound specific (typical listed)



# GHG Inventory Plan Based on Five Principles

---

- ▶ **Relevance** – reflect emissions and decision-making needs
- ▶ **Completeness** – justify exclusions
- ▶ **Consistency** – repeatable over time
- ▶ **Transparency** – full disclosure, audit trail, ability to defend GHG inventory process in a court of law
- ▶ **Accuracy** – noted estimates, etc.



# Organizational Boundary Conditions

---

- ▶ Necessary for complex organizations
- ▶ Plan for inclusion of partially owned or controlled assets (equity or control approach – this could be a strong consideration for an operations hosted at customer locations)
- ▶ Need for consistency amongst joint ventures and partners (legal agreement)
- ▶ If complex will need input from legal and finance

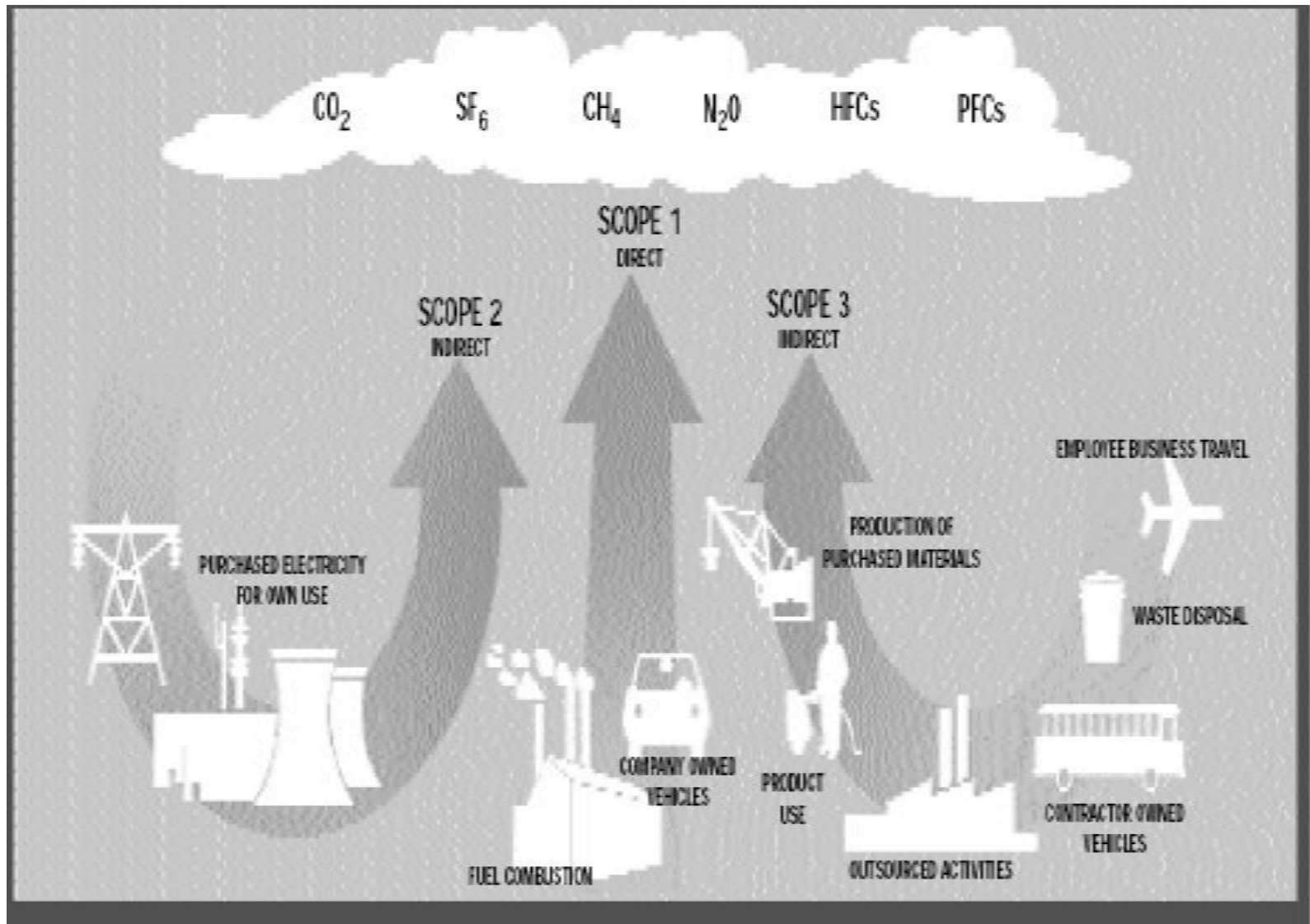


# Operational Boundaries

---

- ▶ Identification of included GHGs and any thresholds applied
- ▶ Scope 1 (direct)
- ▶ Scope 2 (indirect – energy purchases – used at facility)
- ▶ Scope 3 (indirect up or down stream) – this is generally optional





# Quantification Steps

---

- ▶ Data collection and management
- ▶ Emission quantification methods (emission factors, direct measurement, comparative estimates)
- ▶ Normalization component – if any (production, sales, other)
- ▶ Quality assurance (data flow/security, monitoring/measurement, assumptions)



# Base Year & Targets

---

- ▶ Identification and criteria for establishing a base year or base year average
- ▶ Identification and criteria for changing base year calculations (acquisition, divestiture, emission factor update, etc.)
- ▶ Identification and criteria for establishing a target



# GHG Inventory Support Functions

---

- ▶ Roles & Responsibilities: need to be identified and placed within **Job Descriptions**
- ▶ Training and Competency: must be determined and assure appropriate personnel are trained and competent for working on GHG
- ▶ Records Retention: must be determined and maintained



# Auditing and Verification

---

- ▶ Internal Auditing: (required) Entire process must be auditable, verifiable and validated
- ▶ Corrective Action Processes: Used to identify and resolve non-conformances
- ▶ Management Review and Sign-off: Include GHG as part of Management Review process
- ▶ External Third Party Auditing: Verification of organizations assumptions and calculations
- ▶ ISO 14064 Standard; Gives excellent advice and guidance on requirements



# GHG Report

---

- ▶ Documentation and content of output for internal report and externally released report
- ▶ External released report on GHG will be the front line exposure for an organizations Sustainability Drive

# Opportunities

---

- ▶ Provide customers information relating to your organizations carbon footprint
- ▶ Promotion of organization as the “green” alternative
- ▶ Possible carbon credits for your organization or customer carbon credits as Scope 3
- ▶ Reduction in Energy Use and associated dollar savings
- ▶ Provide a standard GHG inventory model for customer use
- ▶ Preparation for forthcoming climate change regulation



# Project Steps

---

- ▶ Select and adapt GHG protocol and framework. Proceduralize GHG Inventory process for repeatability, verification and validation
- ▶ Compile and analyze GHG related data for facility and place within Aspect Matrix
- ▶ Add legal requirements from GHG to Compliance Calendar
- ▶ Perform Management Review and approval on GHG Inventory process
- ▶ Calculate GHG inventory for facility/organization
- ▶ After final review and approval of facility methodologies – calculate GHG inventory for entire organizational boundary



# Project Steps

---

- ▶ Determine business value of reducing GHG
- ▶ Set objectives and targets for GHG improvement programs
- ▶ Monitor and measure GHG
- ▶ Perform internal audits of GHG Inventory process
- ▶ Complete Management Review with GHG as one topic to cover
- ▶ Develop corporate GHG Initiative Reporting

# Proposed USEPA Requirements

---

- ▶ Title V Air Permit for GHG
- ▶ Ms. Jackson stated before the Senate Appropriations Committee that the initial threshold level will be set at 75,000 tons.
- ▶ January 2011 organizations will be required to start phase in for permit.

