

# *Setting the stage for a comparable methodology*

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Craig Hanson  
Senior Associate  
Sustainable Enterprise Program

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GREEN POWER MARKET DEVELOPMENT GROUP

# *Discussion agenda*

## Introduction

Why estimating environmental benefits of renewable energy matters to corporate energy end users

Important next steps



# *World Resources Institute*

- **WRI:** Environmental think tank that transforms ideas into action to protect the planet and improve people's lives
- **Sustainable Enterprise Program:** Harnesses the power of business to create solutions to environment and development challenges



World Resources Institute



# *The Green Power Market Development Group*

Developing corporate  
markets for **1,000 MW** of  
new, cost-competitive  
green power by 2010



Alcoa Inc.  
Cargill Dow, LLC  
Delphi Corporation  
The Dow Chemical Company  
DuPont  
General Motors  
IBM  
Interface  
Johnson & Johnson  
Kinko's  
Pitney Bowes  
Staples



# Renewable and clean energy opportunities

## Opportunity

## Example

### Green electricity

- Solar (photovoltaic), wind, biomass, landfill gas, geothermal, low-impact hydro



### Green thermal energy

- Landfill gas (direct use), solar (thermal)



### "Clean energy" technologies

- Fuel cells



# Types of products

## On-site

- Install renewable energy system on own premises



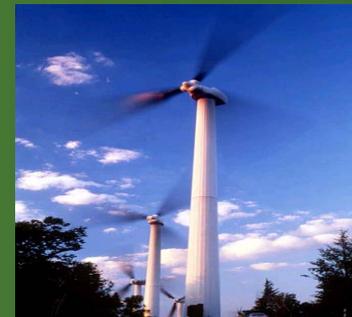
## Grid-based green power

- Buy from utilities or competitive electric service providers



## Green tags

- Buy only the “environmental attributes”



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# Possible value propositions of renewable energy to corporate end users

## 1. Strengthen stakeholder relations

- Customers (image, product differentiation)
- Employees
- Local communities
- Shareholders



## 2. Achieve cost improvements

- Cost savings
- "Peak-shaving"
- Cost stabilization: Fossil fuel price hedge



## 3. Reduce corporate emissions (e.g., CO<sub>2</sub>)



# *Corporate desire to reduce GHG emissions*

- Internal corporate targets (e.g., DuPont)
- Voluntary programs
  - EPA Climate Leaders Program
    - J&J, Staples, IBM, Interface, GM, Alcoa
  - WWF Climate Savers Program
    - IBM, J&J
- Voluntary markets
  - Chicago Climate Exchange (e.g., DuPont)
- Mandatory markets
  - Kyoto ratifying countries (multi-national companies)
  - Expectations of future markets (e.g., states, regions, US?)



# Various types of renewable energy projects/products can reduce emissions

	On-site renewables	Delivered green power	Green tag
<b>Emissions impact</b>	Direct emissions (Scope I)	Indirect emissions (Scope II)	Purchased project offsets
<b>Example</b>			
– <b>Switch from . . .</b>	On-site natural gas	Conventional grid power from Austin Energy	Conventional grid power from electricity supplier
– <b>to . . .</b>	On-site landfill gas	Austin Energy's "Green Choice" power (wind/lfg)	Remain with electricity supplier & buy wind tags from OR



# Currently, green tag providers use a variety of “displaced CO<sub>2</sub> emissions” accounting methodologies

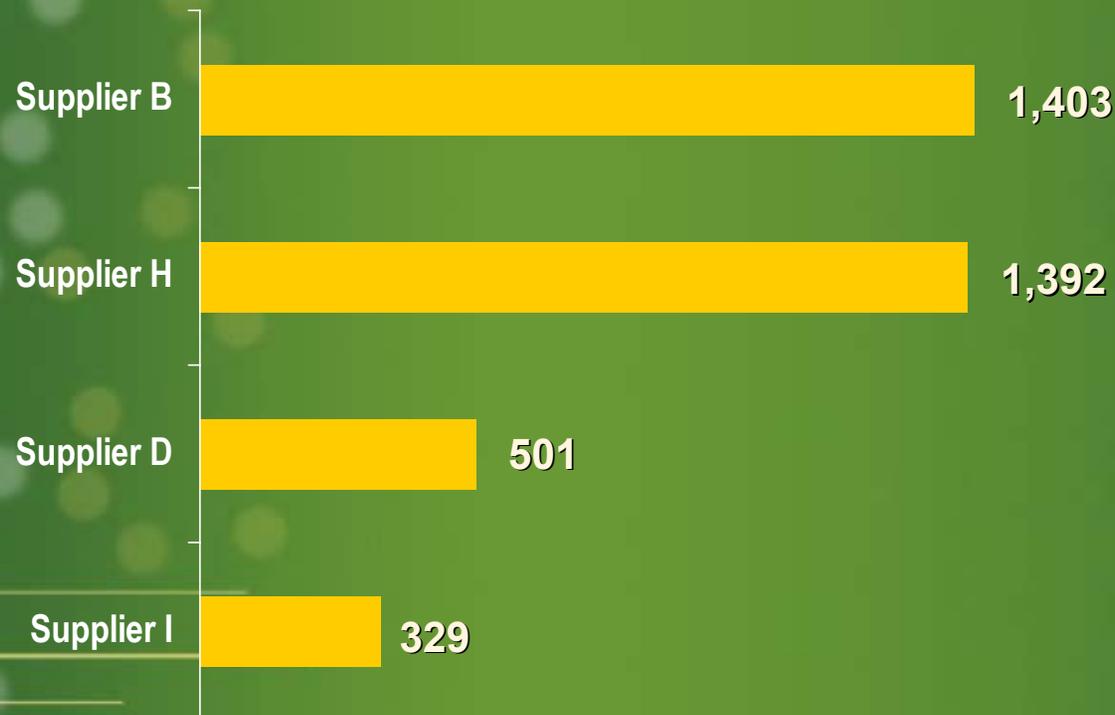
Provider	<u>Type of emissions</u>		<u>Geographic scope</u>			<u>Data source</u>	
	Average	Marginal	State	Powerpool	National	E-GRID	Model
A	X		X			X	
B		X		X			X
C	X			X		X	
D		X		X			X
E	X	X	X	X		X	X
F	X		X			X	
G	X				X	X	
H	X		X		X	X	
I	X		X			X	

Source: Interviews

# *This lack of consistency matters. “Displaced CO<sub>2</sub> emissions” can differ by who sold you the green tag!*

Scenario: “Displaced CO<sub>2</sub> emissions” for green tag from Oregon wind farm according to accounting methods of selected providers

Ibs/MWh



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Scenario: “Displaced CO<sub>2</sub> emissions” for green tag from Oregon wind farm according to accounting methods of selected providers

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# *Why is establishing a common “displaced emissions” accounting protocol important?*

- Uncertainty about “what am I buying?” could discourage corporate green tag purchases
- Strengthens environmental integrity
- Helps circumvent gaming
- Establishes foundation for playing role in emissions markets & facilitates fungibility between schemes



Builds  
business case  
for buying  
green tags



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## *Important next steps*

1. Clarify “for what purposes would a displaced emissions accounting/calculation protocol serve?”



# Considerations when choosing accounting methodology

- “Accuracy”



- Practicality
  - Data availability
  - Cost
  - Simplicity

- Replicability
- Transparency
- Conservativeness
- Alignment with existing/  
emerging protocols



## *Important next steps*

1. Clarify “for what purposes would a displaced emissions accounting/calculation protocol serve?”
2. Engage other related initiatives already in process (e.g., GHG Protocol Initiative)



## ***GHG Protocol Initiative: Some background***

- **Convened in 1998 by WBCSD & WRI**
- ***Mission:* To develop international GHG accounting & reporting standards for business through an inclusive & transparent multi-stakeholder process**
- ***Two modules:* Corporate GHG inventories & GHG projects**



# *Some of the businesses using GHG Protocol: Corporate accounting standards*

- Alcan Aluminum, USA
- Alcoa, USA
- AstraZeneca, UK
- BP, USA
- Bethlehem Steel, USA
- Birka Energi, Sweden
- The Body Shop, UK
- Cinergy, USA
- Eastman Kodak, USA
- CODELCO, Chile
- DuPont
- Edison Mission Energy, USA
- Ford, USA
- ENDESA, Spain
- Green Mountain Energy, USA
- Holcim, USA
- IBM, USA
- IKEA International, Sweden
- International Paper, USA
- Interface, USA
- Johnson & Johnson, USA
- Kansai Electric Power, Japan
- Lockheed Martin, USA
- Miller Brewing Co., USA
- Mirant, USA
- National Renewable Energy Laboratory, USA
- Nike, USA
- Norm Thompson Outfitters, USA
- Norsk Hydro, Norway
- N.V. Nuon Energy, Netherlands
- Pechiney, France
- Philips & Yaming, China
- PWC, New Zealand
- PSEG, USA
- SC Johnson, USA
- Seattle City Light, USA
- Simplex Paper & Pulp, India
- Sony Electronics, Japan
- STMicroelectronics, Switzerland
- Suncor, USA
- Tata Steel, India
- Tokyo Gas, Japan
- Volkswagen, Germany
- We Energies, USA
- 500 PPM GmbH, Germany



# *Climate initiatives based on or informed by the GHG Protocol*

## **Voluntary Climate Initiatives**

- ◆ U.S. EPA Climate Leaders Program
- ◆ WWF Climate Savers Program
- ◆ Respect Europe Business Leaders Initiative for Climate Change (BLICC)
- ◆ USAID Greenhouse Gas Pollution Prevention Program

## **GHG Registries**

- ◆ California Climate Action Registry
- ◆ Wisconsin GHG registry
- ◆ WEF Global Registry

## **Reporting Initiatives**

- ◆ Global Reporting Initiative
- ◆ CERES Sustainable Governance Initiative
- ◆ French REGES Protocol

## **Industry Initiatives**

- ◆ WBCSD Cement Protocol
- ◆ International Forum of Forest and Paper Associations
- ◆ International Aluminium Association
- ◆ NZ Business Council for Sustainable Development
- ◆ European, Japanese, Canadian, and Australian Cement Industry Associations

## **Trading Schemes**

- ◆ UK Emissions Trading Scheme
- ◆ Chicago Climate Exchange

## **Other**

- ◆ European Bank for Reconstruction & Development
- ◆ Climate Neutral Network



# Project accounting module

**Motivation:** Absence of clear international accounting rules for GHG mitigation projects (e.g., avoided/displaced emissions) applicable under different trading programs and initiatives

## Purpose

- Simplify quantification process while improving quality & credibility
- Reduce transaction costs and uncertainty for project developers
- Increase accounting consistency between trading programs
- Increase investor confidence & facilitate trades

## Types of projects

- **Energy & power**
- Industrial
- Fugitive emissions capture
- Agriculture
- Carbon sequestration

**Timing:** Currently underway



## *Important next steps*

1. Clarify “for what purposes would a displaced emissions accounting/calculation protocol serve?”
2. Engage other related initiatives already in process (e.g., GHG Protocol Initiative)
3. Engage the business sector (e.g., energy suppliers, energy end users)



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4. Develop policy perspectives/messages (e.g., “ownership” of indirects)



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3. Engage the business sector (e.g., energy suppliers, energy end users)
4. Develop policy perspectives/messages (e.g., “ownership” of indirects)
5. Develop a workplan for tackling the technical issues (who, how, when, where, . . .)



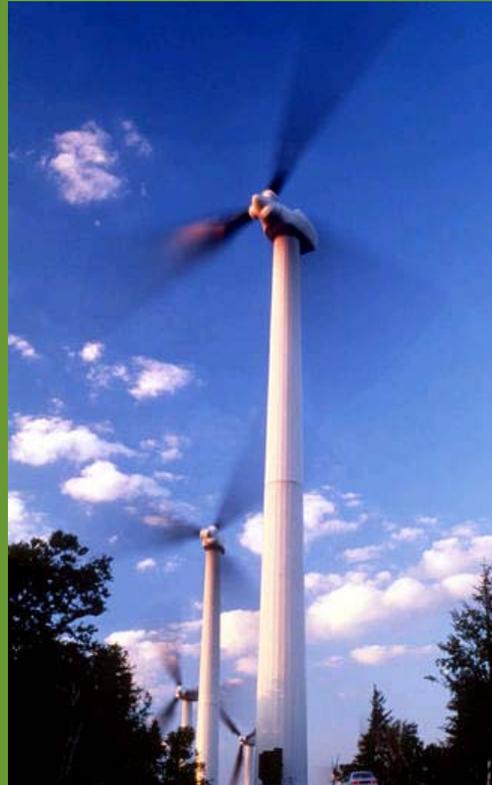
***Thank you!***

***Green Power Market  
Development Group***

**Craig Hanson**

**202-729-7624**

**([chanson@wri.org](mailto:chanson@wri.org))**



***GHG Protocol Initiative***

**Suzie Greenhalgh**

**202-729-7786**

**([suzieg@wri.org](mailto:suzieg@wri.org))**

