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Going Carbon Neutral

Calculating, Reducing and Offsetting GHG Emissions at the Inter-American Development Bank

8th September, 2008

Presentation Outline

- Introduction
- IDB Carbon Neutral Initiative:
  - Calculating
  - Reducing
  - Offsetting
  - Leading by Example
- Next Steps

Introduction

- With climate change a critical priority for IDBs operational activities in LAC, important to ***walk the talk*** & address environmental impacts or “footprint” of internal operations.
- IDB recognizes GHG emissions from activities as key part of environmental footprint & made commitment to carbon neutral.
- Piloted carbon neutral concept at 2006 Annual Meeting.
- Expanded initiative, in 2007, to neutralize unavoidable emissions from HQ through a series of investments in offset projects in LAC.
- Commitment to carbon neutrality also supports objectives of IDB Environment & Safeguards Compliance Policy & Sustainable Energy & Climate Change Initiative, which encourage reduction & control of GHG emissions.
- 3 interwoven programs: Sustainability Initiative (budgetary) financing two program Carbon Neutral & Greening.

Going Carbon Neutral

1. Calculating Emissions

By conducting an annual Greenhouse Gas Inventory of Headquarters facilities (energy, business travel), country offices & the annual meeting.

2. Reducing Emissions

Through the implementation of eco-efficiency measures & greening programs, as well as the purchase of Renewable Energy Certificates (RECs).

3. Offsetting Emissions

With the purchase of VERs sourced from renewable energy & energy efficiency projects in Latin America & the Caribbean.

4. Leading by Example

Communicating the IDBs efforts to calculate & manage its carbon footprint (website, print materials) & promoting the initiative in the Region.

Partnering with Experts

EPA Climate Leaders

- provides standardized approach to inventory calculation & management.
- Based on WRI/GHG Protocol.
- defines tools that help create a solid inventory for the six major GHGs.
- provides framework for reduction goals.
- ensures reductions are credible, real & verifiable.

Carbon Provider

- 1 year partnership agreement.
- Sourcing of carbon credits for 100% of IDB emissions.
- Development of calculation tools & provision of technical advice.

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1. Calculating Emissions

Calculating Emissions:
Definition of Inventory Scope

- **Operational control approach for defining GHG Inventory:**
  - *identification of emissions from sources within facilities that IDB has full (financial and admin) control.*
- **Emission sources categorized as:**
  - ***Core or direct emissions (scope 1)***

    derived directly from activities that result from day to day activities undertaken by IDB.
  - ***Indirect emissions (scope 2)***

    sources not owned by IDB, but essential for business operation (i.e. electricity consumption).
  - ***Optional emissions (scope 3)***

    other indirect emissions (i.e. business travel).
- **Identification of base year:**
  - *base year represents starting point to track progress on emission reductions over time (for IDB base year is 2006).*

Calculating Emissions:
Identification of Sources

Direct Emissions (Scope 1)	***Reporting obligatory***
Stationary Combustion Sources	✓ back up generators, gas
Mobile Combustion Sources	✓ owned vehicles (fleet)
Refrigeration / AC Equip. Use	✓ HVAC
Indirect Emissions (Scope 2)	***Reporting obligatory***
Purchased and Used Electricity	✓ Electricity for lighting, heating etc
Purchased and Used Steam	***X*** may be relevant for manufacturing
Purchased and Used Hot Water	***X*** may be relevant for manufacturing
Purchased and Used Chilled Water	***X*** may be relevant for manufacturing
Optional Emissions (Scope 3)	***Optional***
Business Travel (air)	✓ important part of our operations
Business Travel (hotel)	✓ important part of our operations
Commuting	✓ results derived from commuting survey
Annual Meeting	O variable emissions (up to 150%)

Calculating Emissions:
Identification of Data Managers

- Facilities management (engineer)
  - *HVAC readings (details of refills or discharges)*
- Facilities management (admin)
  - *Fuel use in back up generators*
  - *Owned vehicle mileage logs*
  - *Purchased electricity*
  - *Gas usage (kitchens)*
- Travel manager (outsourced travel dept.)
  - *Business travel (flight) mileage*
  - *Business travel (hotel) logs*
- Country Office greening champions

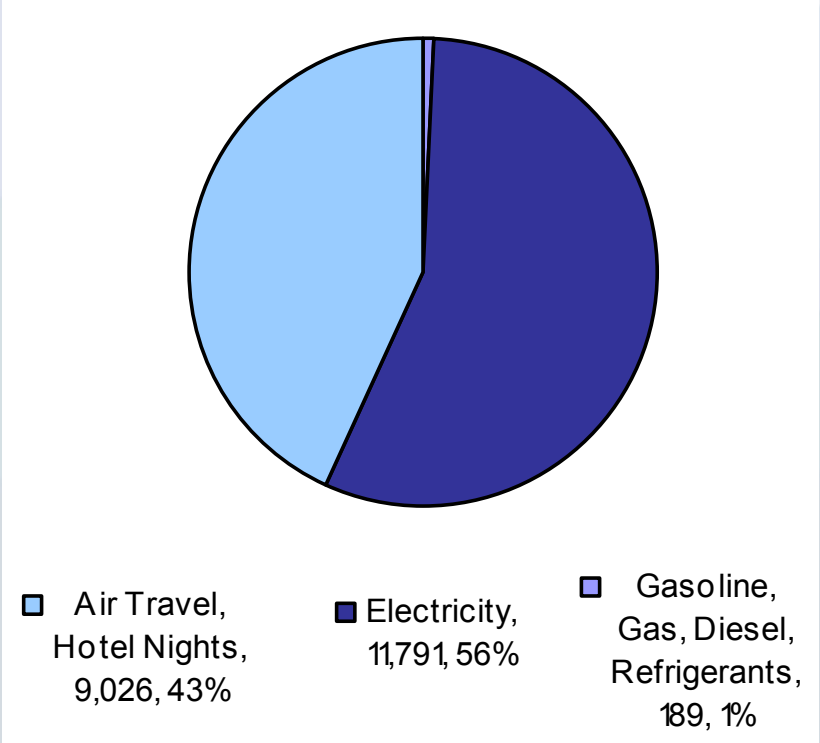
Calculating Emissions: *Inventory 06*

Emission source description	Quantity reported	Unit	CO2 Emmissions (kg)	CH4 Emissions (kg)	N2O Emissions (kg)	tCO2eq
DIRECT SOURCES						
Stationary Combustion Sources						
Diesel generators (NYA 1300, 1330, 1350 and BCDR, Ashburn, VA)	337	gallons	3,418.9	0.5	0.0	3
Natural gas for kitchen and heating use (boilers)	27,209	CCF	148,557.7	14.0	0.3	149
Mobile Combustion Sources						
HQ vehicles	56,292	miles	35,222	973	1,231	36
Refrigeration / AC Equip. Use						
4 chillers with HFC 134a per chiller*	0	lb	0			0.0
Process / Fugitive (specify source)						
SUB-TOTAL DIRECT						188
INDIRECT SOURCES						
Purchased and Used Electricity						
Electricity consumption (NYA 1300)	17,025,552	kWh	8,460,571	213	133	8,506
Electricity consumption (NYA 1330)	1,271,400	kWh	631,802	16	10	635
Electricity consumption (NYA 1350)	2,922,671	kWh	1,452,374	37	23	1,460
Electricity consumtion in owned or leased off site facilities (BCDR, Ashburn, VA)	2,043,900	kWh	1,015,683	26	16	1,021
SUB-TOTAL INDIRECT						11,623
OPTIONAL EMISSIONS						
Transport-related						
Air travel originating in Washington DC -Short-haul	302,495	miles	83,791			84
Air travel originating in Washington DC -Medium-haul	1,248,336	miles	285,869			286
Air travel originating in Washington DC -Long-haul	37,012,276	miles	6,847,271			6,847
Others						
Hotel nights by staff, consultants and guests in DC area (booked by BCD)	3,285	guestnight	49,226			49
Hotel nights by staff, consultants and guests in Countries in Region (booked by BCD)	17,716	guestnight	106,827			107
Commuting						
Distance and mode of transportation used by staff at headquarters	1,848,748	miles				1,521
SUB-TOTAL OPTIONAL						7,373
TOTAL						**20,705**

Calculating Emissions: *Inventory 07*

Emission source description	Quantity reported	Unit	CO2 Emmissions (kg)	CH4 Emissions (kg)	N2O Emissions (kg)	tCO2eq
DIRECT SOURCES						
Stationary Combustion Sources						
Diesel generators (NYA 1300, 1330, 1350 and BCDR, Ashburn, VA)	238	gallons	2,414.6	0.4	0.0	2
Natural gas for kitchen and heating use (boilers)	28,092	CCF	153,378.8	14.5	0.3	154
Mobile Combustion Sources						
HQ vehicles	50,968	miles	32,690	817	1,002	33
Refrigeration / AC Equip. Use						
4 chillers with HFC 134a per chiller*	0	lb	0			0.0
Process / Fugitive (specify source)						
SUB-TOTAL DIRECT						189
INDIRECT SOURCES						
Purchased and Used Electricity						
Electricity consumption (NYA 1300)	17,201,021	kWh	8,547,767	215	135	8,594
Electricity consumption (NYA 1330)	1,248,900	kWh	620,621	16	10	624
Electricity consumption (NYA 1350)	3,045,818	kWh	1,513,570	38	24	1,522
Electricity consumtion in owned or leased off site facilities (BCDR, Ashburn, VA)	2,104,200	kWh	1,045,648	26	16	1,051
SUB-TOTAL INDIRECT						11,791
OPTIONAL EMISSIONS						
Transport-related						
Air travel originating in Washington DC -Short-haul	2,116,024	miles	586,139			586
Air travel originating in Washington DC -Medium-haul	2,390,853	miles	547,505			548
Air travel originating in Washington DC -Long-haul	34,056,230	miles	6,300,402			6,300
Others						
Hotel nights by staff, consultants and guests in DC area (booked by BCD)	3,500	guestnight	52,448			52
Hotel nights by staff, consultants and guests in Countries in Region (booked by BCD)	12,617	guestnight	76,081			76
Commuting						
Distance and mode of transportation used by staff at headquarters	1,848,748	miles				1,463
SUB-TOTAL OPTIONAL						7,563
TOTAL						**21,005**

Calculating Emissions:
GHG Inventory Results



2007 Total:

21,006 tCO2eq

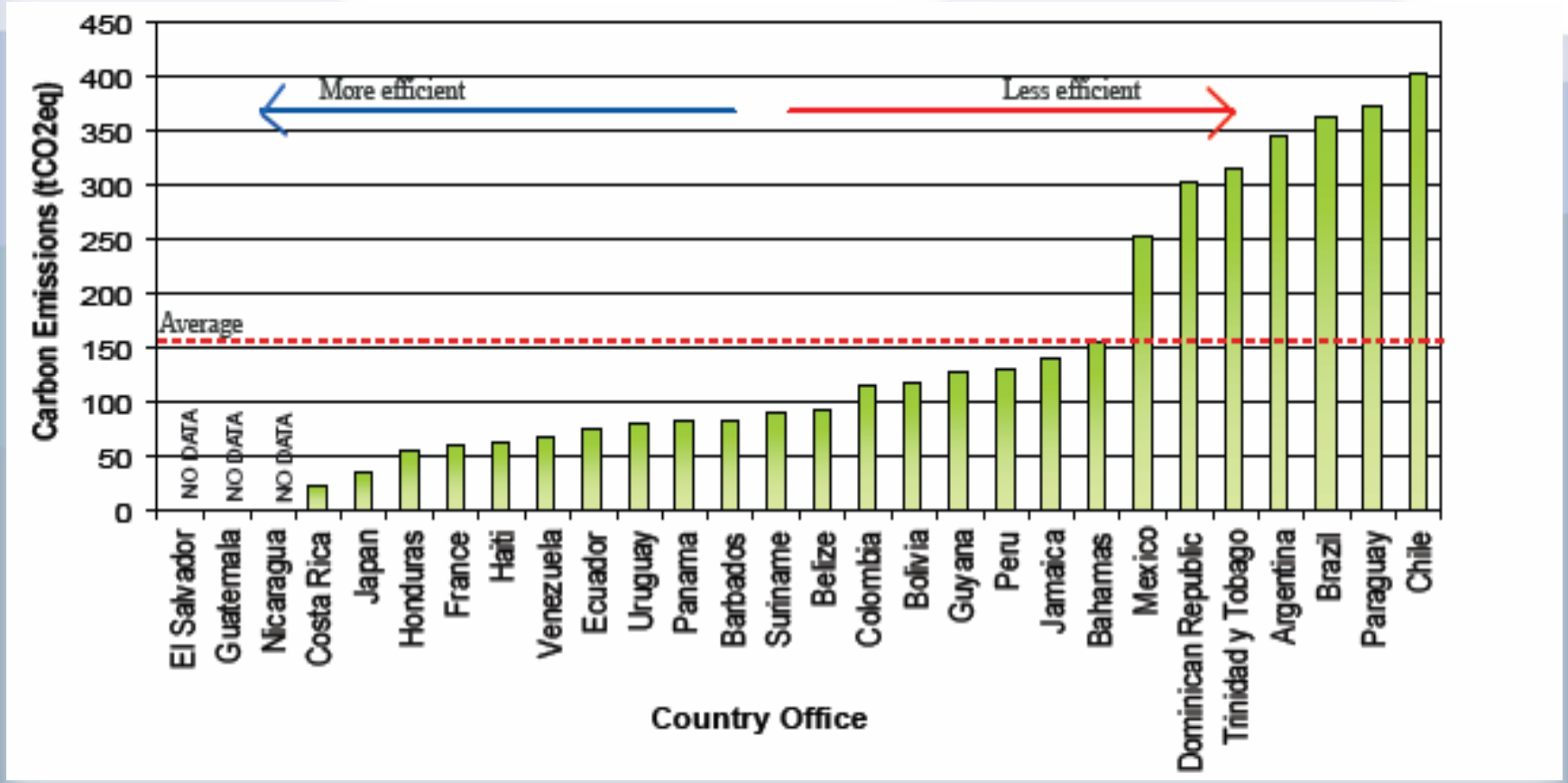
+ Annual Meeting

+ Country Offices

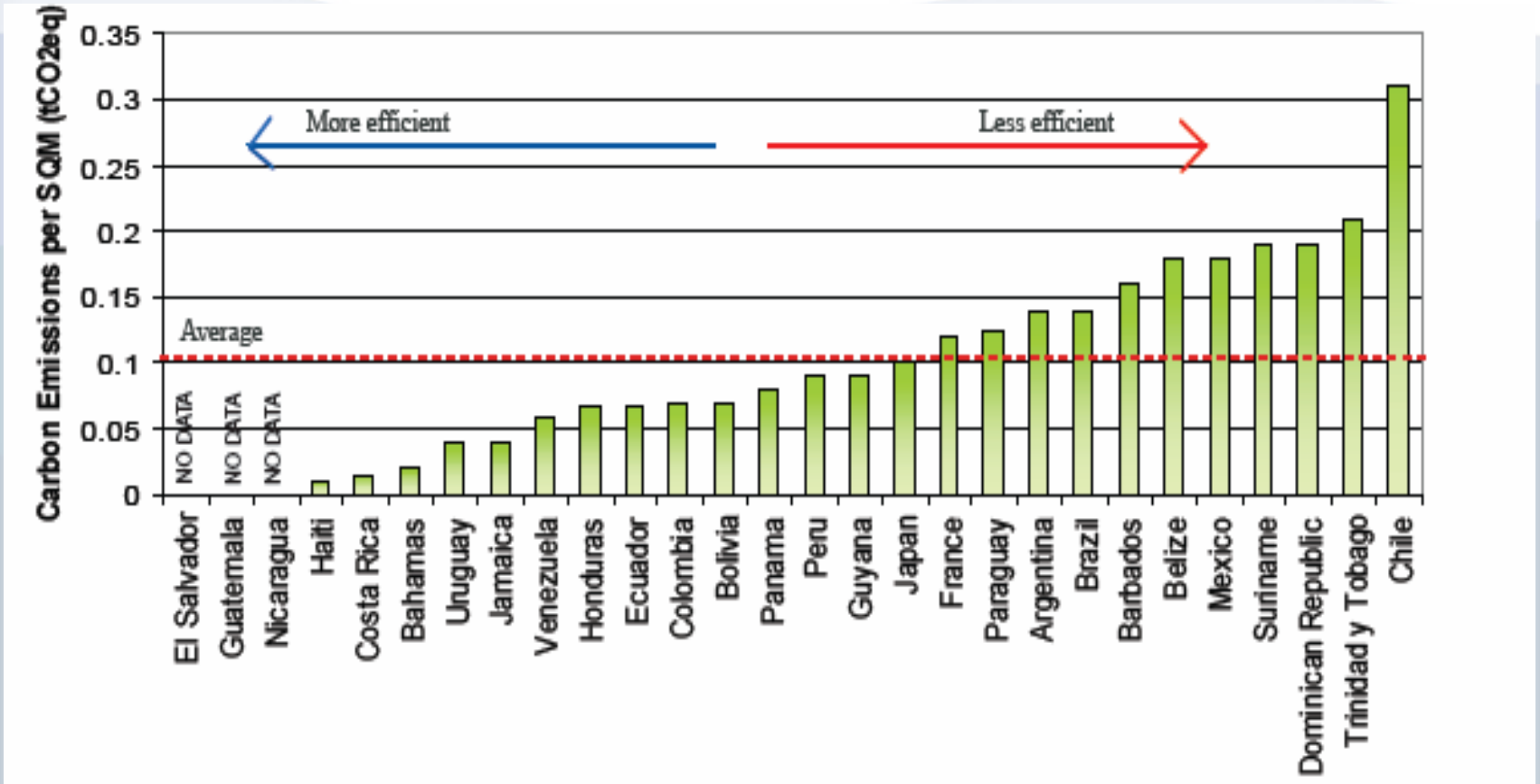
Calculating Emissions:
Country Offices

- In 2007 President Moreno placed emphasis on expanding carbon neutral & greening programs to country offices.
- "Footprint" questionnaire sent to all COFs in late 2007 & individual inventories of each COF conducted in 2008.
- Scope of emissions calculated limited to:
  - *Core or direct emissions (vehicles, generators & HVAC)*
  - *Indirect emissions (electricity consumption).*
  - *Optional (business travel – air & hotel).*
- COFs asked to identify greening champion for each office.
- Data collection sheet developed to facilitate process.
- Results show country office carbon footprints vary between 25 & 250 tCO2eq.

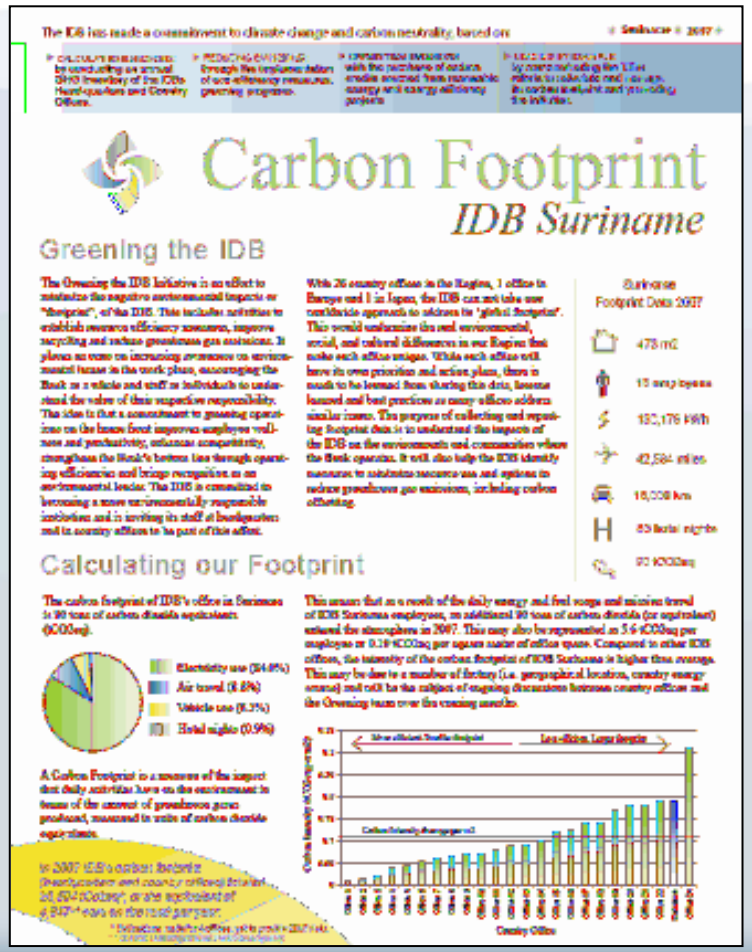
Calculating Emissions:
Total Carbon Emissions by Country Office



Calculating Emissions:
Total Carbon Emissions by M2



Calculating Emissions:
Communicating Country Office Results



- Personalized reporting to each office Representative.
- Simple explanatory language, to inform and update.
- Graphs and charts to show nature and size of carbon footprint.
- Benchmarking against other offices.
- Recommendations on how to reduce footprint.
- Updates for Management of country groups, to keep everyone on same page.

Calculating Emissions:
Annual Meeting

- Annual Meeting variable emissions due to different location/size:
  - 2006 Brazil : 10,000+ participants
  - 2007 Guatemala : 2,391 participants
  - 2008 Miami : 3,324 participants
- Given the size & nature of event, calculation complicated.
- After detailed calculation in 2006 conducted by carbon broker, opted for a 1 tonne per person calculation.
- IDB developing calculator for large meetings. Calculator uses EPA / WRI/GHG protocol emission factors.

Calculating Emissions: *Challenges*

- Establishing relationships with the data managers & learning about the data collection cycles – important not to create additional data cycles.
- Documenting the sources for the emission factors used – important to keep clear records of all sources (both data & emission factors).
- Setting valid assumptions when needed.
- Identifying data from optional sources such as business travel, commuting and large events (i.e. Annual Meeting).
- Collecting data from COFs:
  - Data in some cases unavailable.
  - Variations in emission factors (i.e. purchased electricity).
  - May not have control in leased offices of facilities & utilities.
  - Lack of understanding of the program & or concepts involved.

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2. Reducing Emissions

Reducing Emissions: *Greening*

"Greening the IDB" taskforce created in 2007 to facilitate reduction in environmental & social "footprint" or negative impacts of IDB HQ & country office facilities, & increase awareness on environmental & social sustainability issues in work place, focusing on encouraging staff to understand the value of their own responsibility.

Activities include:

- **At Headquarters:**
  - Facilities upgrades.
  - Purchase of renewable energy.
  - Energy efficiency improvements (energy audit planned 2008)
  - Staff awareness & actions (commuting days, simple tips).
  - Sustainable procurement
- **In Country Offices:**
  - Working with each COF to identify efficiency opportunities.
  - Country Carbon Challenge.
  - Development of educational materials.

Reducing Emissions:
Facilities Upgrades

Historical activities

- Prior to Greening initiative facilities management strong focus on efficiency (lighting upgrades, waterless urinals, recycling programs, sensors, LEED).
- As a result IDB HQ among top 10% of comparable buildings (qualified with 86 Energy Star in 2007 & in 2008 under new criteria raised to 90)

Recent activity: Cafeteria renovation

- Considered green build criteria (flooring, lighting, recycling).
- Menus include organic and local market foods.
- Mug program.

Energy Audit & Other Studies

- Energy audit is key (planned Fall 08)
- Commuting strategy (based on commuter survey, April 2008).
- Green roofing (IDB has more than 50,000 sq.ft of roof).

Reducing Emissions:
Renewable Energy Certificates

- Commitment to purchase RECs equivalent to 100% of HQ electricity consumption.
  - 2007: procured 24,000,000 kWh of RECs as part of the IDBs current electricity supplier contract.
  - 2008: procured 24,000,000 kWh of RECs (100% wind power, new renewables, Green E certified) through competitive bid.
- Reduces purchased electricity GHG emissions to approx. 0 (minor adjustments due to location of RECs & energy mix).
- IDB made public commitment to EPA Green Power Partnership to continue to purchase Energy from a renewable source.
- Audit will also consider options for onsite renewables.

Reducing Emissions: *Travel*

With today's "virtual meeting" technologies, it is possible to boost productivity, avoid extended trips & avoid unnecessary travel costs. In 2007 IDB upgraded its videoconference (VC) facilities. It has 73 facilities throughout HQ as well as in every country office.

Comparison of carbon emissions impact with and without virtual mission alternative. Case Study: PR-L1030 (INE/RND)

Financial Cost to IDB	$20,072
2 return air fares Washington DC - Asuncion ($7,000 per flight)	
2 staff, 10 nights each in Hotel ($110 p/p p/n)	
2 staff, 11 days per diem ($176)	
Carbon Emissions from Travel	2 tonnes
2 Washington DC - Asuncion (9,200 miles return trip)	
Personal Cost to Staff	High
2 staff, 11 nights away from home, including 1 weekend	

Financial Cost to IDB	0*
Events previous to the Virtual mission itself (4 VC = 12 hrs)	
Virtual mission (5 VC = 18 hrs)	
After mission, adjustments meetings (2 VC = 6 hrs)	
Carbon Emissions from travel	0
Personal Cost to Staff	0

***VCs with COFs use IP lines at no additional unit cost. VCs with external institutions use ISDN lines at an approximate cost of a long distance call.**

Reducing Emissions:
Country Carbon Challenge

Challenges Country Offices to propose solutions

- Innovation
- Short and long/term environmental impact (potential to reduce the carbon footprint)
- Replicability of project in other IDB country offices.
- Ease and timescale of implementation.
- Return on investment in efficiency gains.

Reducing Emissions:
Changing Behaviour

- Key to changing behaviour:
  - Information (email tips, articles, training, presentations).
  - Dialogue (making friends & cultivating champions).
  - Know your allies.
  - Praise where praise is due.
  - Praise where praise is not due (shaming into doing).
  - Prizes & give-aways.
  - Incentives / annual staff review.
  - Consistency in message.

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3. Offsetting Emissions

Offsetting Emissions: *Approach*

- **Basic Concept:** Reduce what you can, offset what you can not
- **Partner approach:** sought 1 yr renewable partnership
- **Competitive bidding:** from leading international/local organizations offering carbon emission offset solutions (public bid).
- **Proposal evaluation:** made on the basis of the most economically advantageous offer based on:
  - project location (IDB member countries);
  - credibility & delivery guarantee of the emission reductions;
  - projects demonstrating significant contribution to mitigation of climate change (renewable energies or energy efficiency);
  - additional projects, ensuring environmental & social sustainability benefits for communities involved in projects.
  - third party verification.
- **Award:** Proposals evaluated by 3 person review team, resulting in partnership agreement with a carbon offset provider in 2007 & agreement to purchase VERs from projects in LAC at fixed price.

Offsetting Emissions: *Project Portfolio*

Supporting Energy Efficiency in the Manufacturing Industry, Mexico

19,500 VERs, September 2008

- *Pre CDM VERs from large energy efficiency program in private sector*

Improving environmental performance in a collectivized company, Peru

16,000 VERs, November 2007

- aims to improve the environmental performance of a small brick manufacturing plant in Lima through a fuel switch from coal to natural gas.

Sustainable energy supply for Colombian non-interconnected zone

5,000 VERs, January 2007

- aims to replace fuel oil with clean hydro power for indigenous communities in "non-interconnected zone" of Colombian rainforest.

Micro-hydro for indigenous communities, Chel, Guatemala

1,000 VERs, November 2006

- aims to meet basic energy needs of geographically isolated indigenous communities in Guatemala by making use of a renewable energy source.

Biofuels in Tocantins, Brazil

11,000 VERs, April 2006

- aims to substitute use of fossil fuels with biodiesel which will fuel water pumps for small-scale irrigation, traction for agro forestry & energy production for small-scale farmers.

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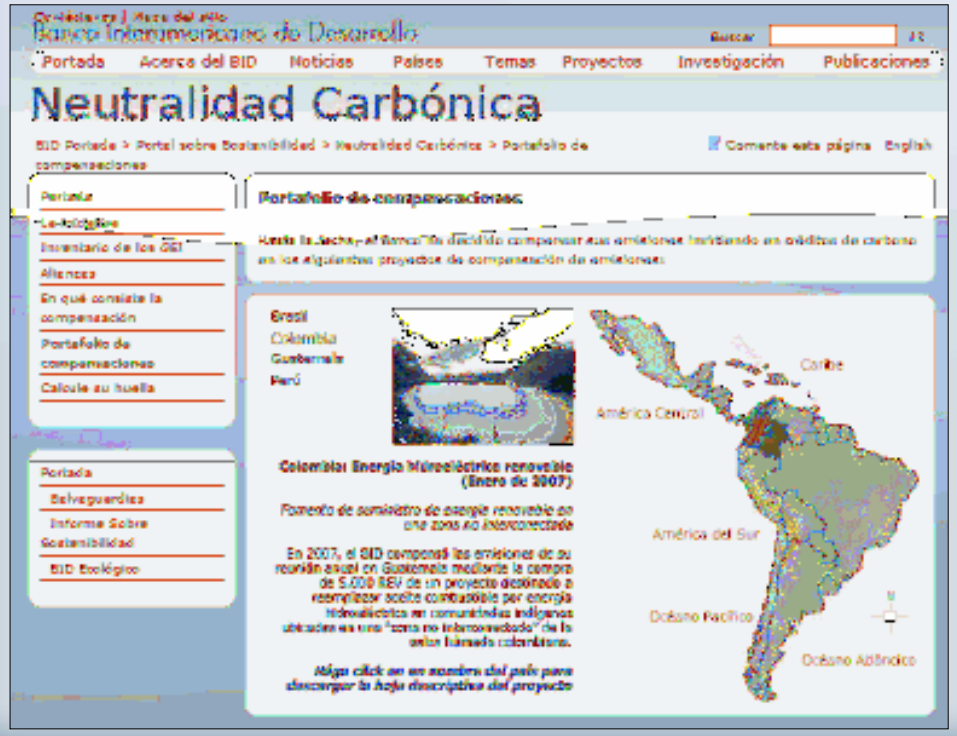
4. Leading by Example

Information

- Detailed information about how the IDB is calculating, reducing & offsetting its carbon footprint is available online at www.iadb.org/sustainability
- Results reported in annual Sustainability Review.
- Particular emphasis over coming months on diffusing results of COF inventories & identifying reduction & offsetting goals.
- Ongoing discussion with peers.
- By becoming a best in class example of how to calculate, reduce & offset emissions, hope to influence client countries.

Carbon Neutral Materials

- Carbon Neutral website
- Fact sheets on offset projects
- Event calculator (under development)



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Next Steps

Next Steps

Headquarters

- Set reduction goal (commitment to Climate Leaders): Internal discussions with facilities & IT managers, regarding capital improvements programmed for 5 yr period
- Energy Audit to be conducted Fall 2008.
- Efficiency savings to be identified & quantified during preliminary audit & capital improvement resources to be requested for 2009.
- Goal setting expected in late 2008.
- Development of CSR system inc. GHG inventory tracking & reduction measurement.

Country Offices

- Award of Country Carbon Challenge (September)
- Development of educational materials (October)
- Country level sustainability reporting including footprint reporting (2009)

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Thank you!

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