Texas City Attorneys Association
South Padre Island – June 10, 2009

Climate Change and its Impacts on Municipal Operations

Presented by:

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Carbon Credits

Why should a city consider generating and selling them?

- Revenue
- Global Environmental Benefits
- Positive Public Relations

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Too Good to be True?

- Maybe.
- But chances are good.
- How good depends on cap and trade.
  - Will legislation pass?
    - This session?
    - Or be delayed?
  - Will EPA pass regulation?

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Is Global Warming Real?

- Two sides to argument

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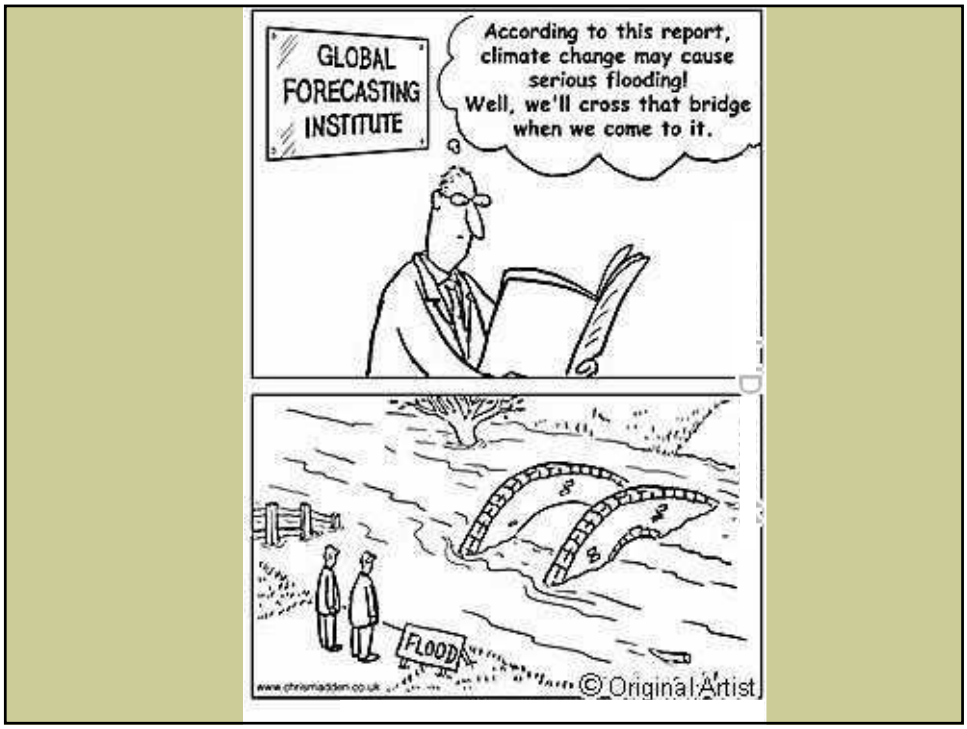
GLOBAL FORECASTING INSTITUTE
According to this report, climate change may cause serious flooding!
Well, we'll cross that bridge when we come to it.
FLOOD
© Original Artist


HEAR THE EVIDENCE!
SEMINAR ON GLOBAL WARMING
CANCELED! FROZEN PIPES!
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Is Global Warming Real – Does it Matter?

- Which scientific view is right – immaterial 2 reasons:
  - Cap and Trade seems inevitable
  - Enough people in U.S. believe already that voluntary markets have formed
    - Regulated markets exist worldwide
- Consider the opportunities

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Kyoto Protocol

- U.S. signed original treaty in 1992
  - 166 nations
  - United Nations Framework Convention on Climate Change (UNFCCC)
- Kyoto – 1997
  - U.S. and Kazakhstan
  - Obama Administration set to sign

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Cap and Trade Legislation

- Touted for positive benefits
  - Control global warming
  - Creates jobs
  - Reduce the budget deficit
- Will also create hardships
- Creates opportunities

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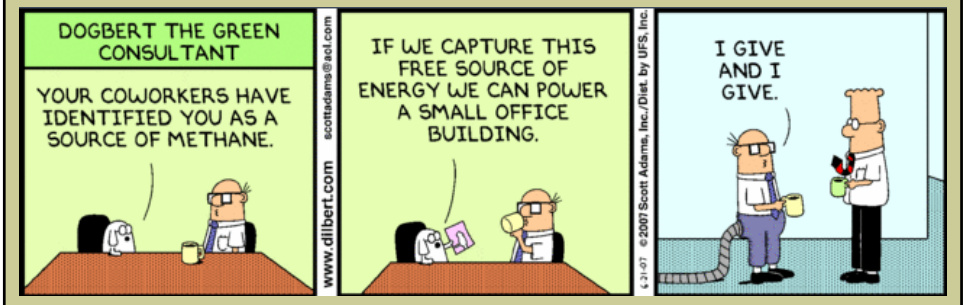

Opportunity to Sell Environmental Attributes

- Commodities
- Sold throughout world
- Global issue – global market
- U.S. Regional markets
- Volume and Value escalating

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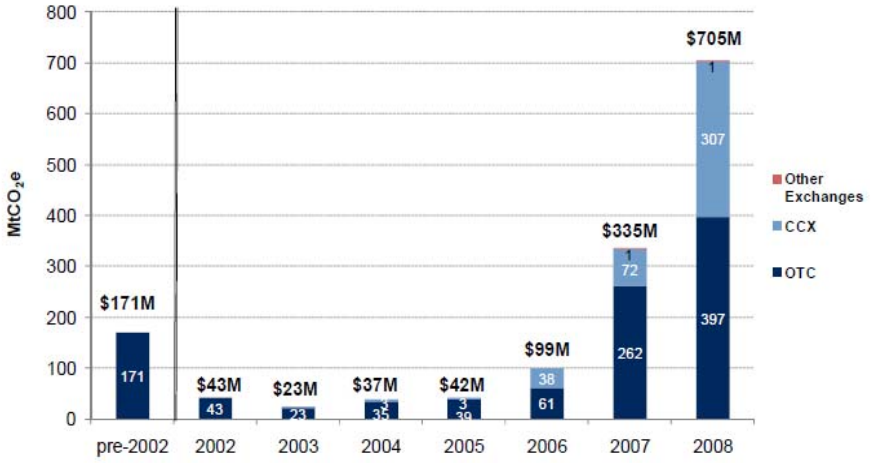
Fortifying the Foundation: State of the Voluntary Carbon Markets 2009

Historic Values for the Voluntary Carbon Markets



Environmental Attributes in Texas

- Carbon Credits
- Renewable Energy Credits
- Compliance Premiums
- In addition
  - Production Tax Credits
  - Investment Tax Credits

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DOE Grants

Abilene	$1,131,600	Corpus Christi	$2,757,500
Allen	$693,000	Dallas	$12,787,300
Amarillo	$1,781,600	Del Rio	$156,300
Arlington	$3,428,100	Denton	$1,117,000
Austin	$7,492,700	DeSoto	$187,700
Baytown	$672,300	Duncanville	$148,600
Beaumont	$1,104,200	Edinburg	$683,100
Bedford	$201,200	El Paso	$5,802,700
Brownsville	$1,659,200	Euless	$454,200
Bryan	$695,100	Flower Mound	$607,700
Carrollton	$1,189,100	Fort Worth	$6,738,300
Cedar Hill	$176,600	Frisco	$825,800
Cedar Park	$519,700	Galveston	$580,100
College Station	$791,100	Garland	$1,978,800
Conroe	$538,300	Georgetown	$201,900
Coppell	$171,200	Grand Prairie	$1,474,400

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DOE Grants

McAllen	$1,292,500
McKinney	$1,071,500
Mesquite	$1,200,900
Midland	$997,700
Mission	$629,500
Missouri City	$634,900
New Braunfels	$498,200
North Richland Hills	$584,900
Odessa	$915,100
Pasadena	$1,358,600
Pearland	$685,900
Pharr	$608,900
Plano	$2,545,400
Port Arthur	$541,300
Richardson	$1,036,200
Round Rock	$955,400
Grapevine	$503,500
Haltom	$165,700
Harlingen	$645,100
Houston	$22,765,100
Huntsville	$166,500
Hurst	$165,500
Irving	$2,058,600
Keller	$155,000
Killeen	$1,027,000
Lancaster	$143,300
Laredo	$2,083,600
League City	$598,200
Lewisville	$913,000
Longview	$781,900
Lubbock	$2,109,900
Mansfield	$179,700

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DOE Grants

Rowlett	$481,900
San Angelo	$865,000
San Antonio	$12,897,000
San Marcos	$498,100
Sherman	$170,000
Sugar Land	$781,400
Temple	$593,200
Texarkana	$174,300
Texas City	$191,600
The Colony	$156,200
Tyler	$1,005,700
Victoria	$605,700
Waco	$1,246,300
Wichita Falls	$996,100

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DOE Grants

- Goal to award ALL the grant money
  - If rejected, reapply
- Listing of virtually preapproved projects
- "Reduction and Capture of Methane and Greenhouse generated by landfills or similar waste related sources."
- Deadline 6/25

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DOE Grants

- If not on list – not to worry
  - State funds
  - $560 million
  - 60% must be passed through
  - Email alerts – website

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What are Carbon Credits, RECs and Compliance Premiums?

- See paper for definitions of RECs and Compliance Premium
  - REC 16 TAC §25.5(108) and 16 TAC §25.173(c)(13)
  - Compliance Premium 16 TAC §25.173(c)(2)
- Carbon credit – created when an emitter
  - Reduces his CO_2e emissions
  - Voluntarily
  - Additionality

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What are Carbon Credits?

- Not just CO_2
- Carbon Equivalent Unit CO_2e
- 6 Principal GHG's in CO_2e
  - CO_2 carbon dioxide
  - MH_4 methane
  - N_2O nitrous oxide
  - HFC hydroflourocarbons
  - PFC perflourocarbons
  - SF_6 sulfur hexaflouride

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Value of Carbon Credits

- Jason will discuss dollar values
- MH_4 – 21 x
- N_20 – 300 X

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3 Questions

- Who buys these credits?
- Why?
- What do they cost?

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Buyers

- Green Marketing
- Sincere attempts to slow global warming
- Pre-compliance buying
- Investment

Sellers

- Cities are typically sellers of CO_2e

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Political and Legal Background

- Massachusetts v. EPA
  - Supreme Court case that held that GHG are pollutants and may be regulated under FCAA by EPA.
  - Court remanded case to EPA to reconsider the petition for rulemaking.
    - FCAA requires EPA to prescribe regulations for GHG if it determines that GHG "may reasonably be anticipated to endanger public health or welfare."

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Endangerment Finding

- Bush EPA not proceed
- Obama EPA made endangerment finding on 4/17/09
- Bargaining chip with Congress
  - Cap and Trade Legislation Preferred
  - EPA now positioned to pass rule
    - Probable lawsuit

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GHG Reporting Rule

- Proposed Rule
  - Comments due 6/9, yesterday
- 85-90% of all GHG emitters
- 1300 sources
- Information gathering – not regulatory
- Goal makes sense

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GHG Reporting Rule

- Reporting Thresholds
  - Any facility that emits > 25,000 metric tonnes of GHGs
  - All manufacturers of motor vehicles
  - All suppliers of fossil fuels (refineries, coal plants)
  - Certain other sources – the "all in" sources (for city purposes a relevant source is landfills)

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GHG Reporting Rule

- Rigorous requirements
- Failure to report – up to $32,500/day
- Fraudulent report – criminal penalties
- First Report due 1/1/11
  - 2010 data
  - Have to start in 6 months

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Cap and Trade Legislation

- American Clean Energy and Security Act of 2009
  - Waxman-Markey
  - 900 plus pages
  - Passed House Energy and Commerce Committee in May 2009

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Cap and Trade - "CAP"

- Carbon emitters will have limit (cap on the amount of GHG's they are allowed to emit)
  - By legislation, or
  - By EPA rule
- Stay at or below or face fines/injunctions
  - This gives allowances to emit financial value

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Cap and Trade – "Trade"

- Emitter that is capped has option
  - Make physical or operational changes, or
  - Trade (buy) CO_2e credits
    - Because less expensive
- Each year allowances are reduced
  - Supply and demand
  - CO_2e becomes more valuable

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Cap and Trade – Limits

- 85% of total U.S. GHG emissions
  - Not landfills
  - Not wastewater plants
- 2010 – 3% below 2005 levels
- 2020 – 17% below 2005 levels
- 2050 – 83 % below 2005 levels
- Offsets expressly allowed
  - Must reduce 1.25 tonnes of trailed emission for 1.00 tonnes of capped emissions

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Cap and Trade – Incentives

- Emitter – buying offsets cost less than self reduction
- Seller – revenue producer
- Environment – fewer GHG emissions
- Economy – more cost effective

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Cap and Trade – Objections

- Philosophical/Economic
  - Cost of power increases
    - To suppliers
    - To consumers
  - Cap and Tax
- Details
  - Allowance v. Auction
  - Coal states unemployment
  - Hydroelectric states precluded
  - Not likely to pass as now drafted
  - May not pass at all

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Carbon Offsets

- Carbon Offsets ("Carbon Credits") represent the reduction of one metric tonne (MT) of greenhouse gas emissions (GHGs) from the atmosphere
- Come from projects that either destroy GHGs or prevent their emission in the first place
- Projects must be Voluntary and Additional
  - Voluntary – not mandated by any law or regulation
  - Additional – beyond business as usual
- Credits measured in MTs of Carbon Dioxide Equivalent (CO2e) because CO2 is the most prevalent greenhouse gas
- Can be traded as a commodity

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Types of Projects that Can Create Offsets (Differ by registry)

- Landfill Gas Capture
- Livestock Methane Capture
- Aforestation/Deforestation
- Renewable Energy (wind-solar-biomass)
- Coal Mine Methane Capture
- Fuel switching

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Carbon Market Set-up

- International
  - Mandatory Programs (EU ETS, Kyoto Protocol)
- U.S.
  - Regional Mandatory Programs (RGGI, WCI)
  - Voluntary Market
  - Pending for mandatory federal cap and trade program

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Who Uses Offsets?

- Power producers and companies in states that are part of regional mandatory programs
- Companies looking to reduce the environmental impact of their operations or prepare for future mandatory programs
- Companies voluntarily undertaking “green” marketing initiatives

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How Offsets are Created?

- Identify and implement an eligible project
- Monitor project data (QA/QC) over the course of the crediting period (typically a year)
- Calculate emission reductions
- Have project operations and emission reductions calculations verified by an independent third-party
- Submit verification results to registry – registry then issues credits

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How are they sold?

- OTC versus Exchange market transactions
- Selling forward
- Selling vintage credits
- Banking of credits

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St. Landry Parish Project example

- Project Identification
- Project yields estimated
- Term Sheet negotiated
- Commission approval
- Full Contract signed
- Project implementation

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What did it cost?

- Phase 1 = 16 wells
- Collection system
- Flare
- Current activities

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What would I be getting into?

- Data Collection
- Long term relationship
- Commodity Market participation

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Why should you consider this?

- Possible Regulatory Risk
- Possible compliance hedge
- Possible revenue source
- Better positioned for future project negotiations

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THE END

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