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DU CANADA

Serving Canadian Business Abroad

Green Building in the
South Central US:
Exotic to Essential in One Short
Decade



Department of Foreign Affairs
and International Trade

Ministère des Affaires étrangères
et du Commerce international

Canada



South Central US Facts and Figures

- 5 state region: Texas, Louisiana, Arkansas, Oklahoma and Kansas
- 39 million people
- 4 of the nation's ten fastest growing MSAs (Metropolitan Statistical Areas)
- Top region for employment growth

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Funky green

~

New Orleans style

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Colonial green

~

French Quarter style



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21st Century Green
LEED Platinum
~
Dallas style

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Healthy Green
LEED Platinum

~

Austin Style:

Dell Children's Hospital ~
World's First LEED Platinum
Hospital





i. Sustainability/LEED:

Becoming Business as Usual

~

Case Study #1: City of Dallas
Green Building Code

CITYWIDE GREEN BUILDING PROGRAM

Summary of Ordinance Requirements



Adopted April 9, 2008

www.dallascityhall.com

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New Residential

Mandatory Measures Effective Oct. 1, 2009

- **15%** more energy efficient than the 2006 International Energy Conservation Code (IECC) as shown by:
 - IC3 – Energy Systems Lab, Inc. certificate
 - HERS index of **85**, or
 - Alternatively, to prove that the **15%** requirement has been met, builders can use the following standards for compliance:
 - ENERGY STAR
 - Green Built North Texas
 - LEED H ,or
 - Approved equivalent standard

New Residential- Cont.

- Meet at least **four** of the following water reduction requirements:
 1. The average flow rate for all lavatory faucets must be **2.0** gallons per minute
 2. The average flow rate for all showerheads must be **2.0** gallons per minute
 3. The average flow rate for all toilets must:
 - 3.1. be **1.3** gallons per flush;
 - 3.2. be dual-flush and meet the requirements of ASME A112.19.14; or
 - 3.3. meet the United States Environmental Protection Agency WaterSense specification and be certified and labeled accordingly.
 4. ENERGY STAR labeled dishwasher that uses **6.0** gallons or less per cycle
 5. ENERGY STAR labeled clothes washers with modified energy factor (MEF) \geq **2.0** and water factor (WF) $<$ **5.5**
 6. Utilize drip irrigation emitters for all bedding areas of the landscape plan

New Residential- Cont.

- Requires submittal of checklist from one of the following:
 - Green Point, Green Communities, Green Built North Texas, LEED H , or approved equivalent standard

New Commercial

Mandatory Measures Effective Oct. 1, 2009

- For all commercial buildings < 50,000 sf:
 - 15% more energy efficient than Energy Code (2006 IECC)
 - Indoor water fixture use 20% more efficient than building baseline to meet EPA Act 1992
 - Cool Roofs for slopes 2:12 or less
 - Outdoor Lighting restriction
- Require building owners to agree to utility companies releasing annual consumption data to City

New Commercial- Cont.

- For buildings 50,000 sf and larger:
 - 85% LEED certified level compliance under any of the applicable LEED rating systems or equivalent (ex. must achieve at least 22 LEED NC v2.2 points)
 - Points required must include:
 - 1 point under the water efficiency credit titled “Water Use Reduction (20% Reduction)”
 - A minimum of 2 points (14% better than ASHRAE 90.1-2004) under the energy and atmosphere credit titled “Optimize Energy Performance”
 - Requires building owners to agree to utility companies releasing annual consumption data to City

Phase 2 New Construction

Mandatory Measures Effective Oct. 1, 2009

- **All New Residential Construction**

- All proposed projects must be LEED-certifiable under the LEED for homes standard, Green Built North Texas-certifiable, or meet an equivalent minimum green building standard certified level although formal certification by the USGBC, Green Built North Texas or an equivalent entity is not required
- **Points required for LEED certifiable must include:**
 - 1 point under the water efficiency credit titled "Indoor Water Use"
 - A minimum of 4 points (performance of ENERGY STAR for homes with a HERS rating of 83 or less) under the energy and atmosphere credit titled "Optimize Energy Performance"

Phase 2 New Construction

- For **Green Built Certifiable** requirements must include:
 - **17.5%** better than the 2006 International Energy Conservation Code (IECC) as shown by:
 - IC3 – Energy Systems Lab, Inc. certificate
 - HERS index of **83**, or
 - Alternatively, to prove that the **17.5%** requirement has been met, builders can use the following standards for compliance:
 - ENERGY STAR
 - Green Built North Texas
 - LEED H ,or
 - Approved equivalent standard

Phase 2 New Construction

- Meet at least **four** of the following water reduction requirements:
 1. The average flow rate for all lavatory faucets must be **2.0** gallons per minute
 2. The average flow rate for all showerheads must be **2.0** gallons per minute
 3. The average flow rate for all toilets must:
 - 3.1. be **1.3** gallons per flush;
 - 3.2. be dual-flush and meet the requirements of ASME A112.19.14; or
 - 3.3. meet the United States Environmental Protection Agency WaterSense specification and be certified and labeled accordingly
 4. ENERGY STAR labeled dishwasher that uses **6.0** gallons or less per cycle
 5. ENERGY STAR labeled clothes washers with modified energy factor (MEF) ≥ 2.0 and water factor (WF) < 5.5
 6. Utilize drip irrigation emitters for all bedding areas of the landscape plan

Phase 2 New Construction

- **All New Commercial Construction**
 - All proposed projects must be LEED-certifiable, Green Built North Texas-certifiable or certifiable under an equivalent green building standard at the minimum certification level, although formal certification by the USGBC, Green Built North Texas or an equivalent entity is not required
 - **Points required for LEED certifiable must include:**
 - 1 point under the water efficiency credit titled “Water Use Reduction (20% Reduction)”
 - A minimum of 3 points (17.5% better than ASHRAE 90.1-2004) under the energy and atmosphere credit titled “Optimize Energy Performance”
 - Multifamily developments have the option of using LEED NC, LEED for homes, Green Built North Texas or an equivalent green building standard



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II. Follow the Money



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30% of all LEED projects in the US are
government-owned or –leased facilities

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us federal government
owns/occupies >500,000 buildings



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Case Study #2

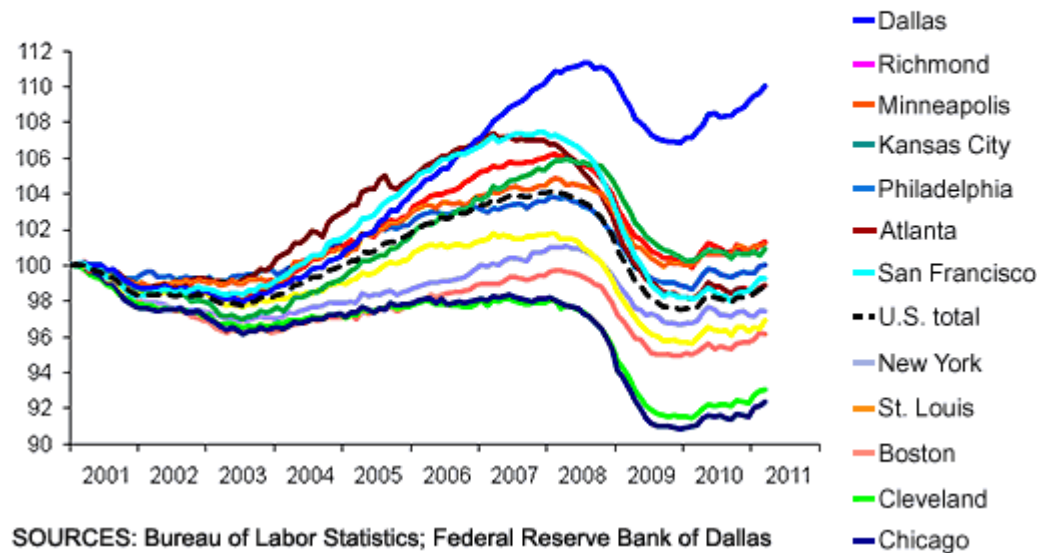
New Orleans Recovery School District - \$1.8 billion in US federal money for new green schools and green renovations



Chart 2

Payroll Employment by Federal Reserve District

Index, January 2001 = 100

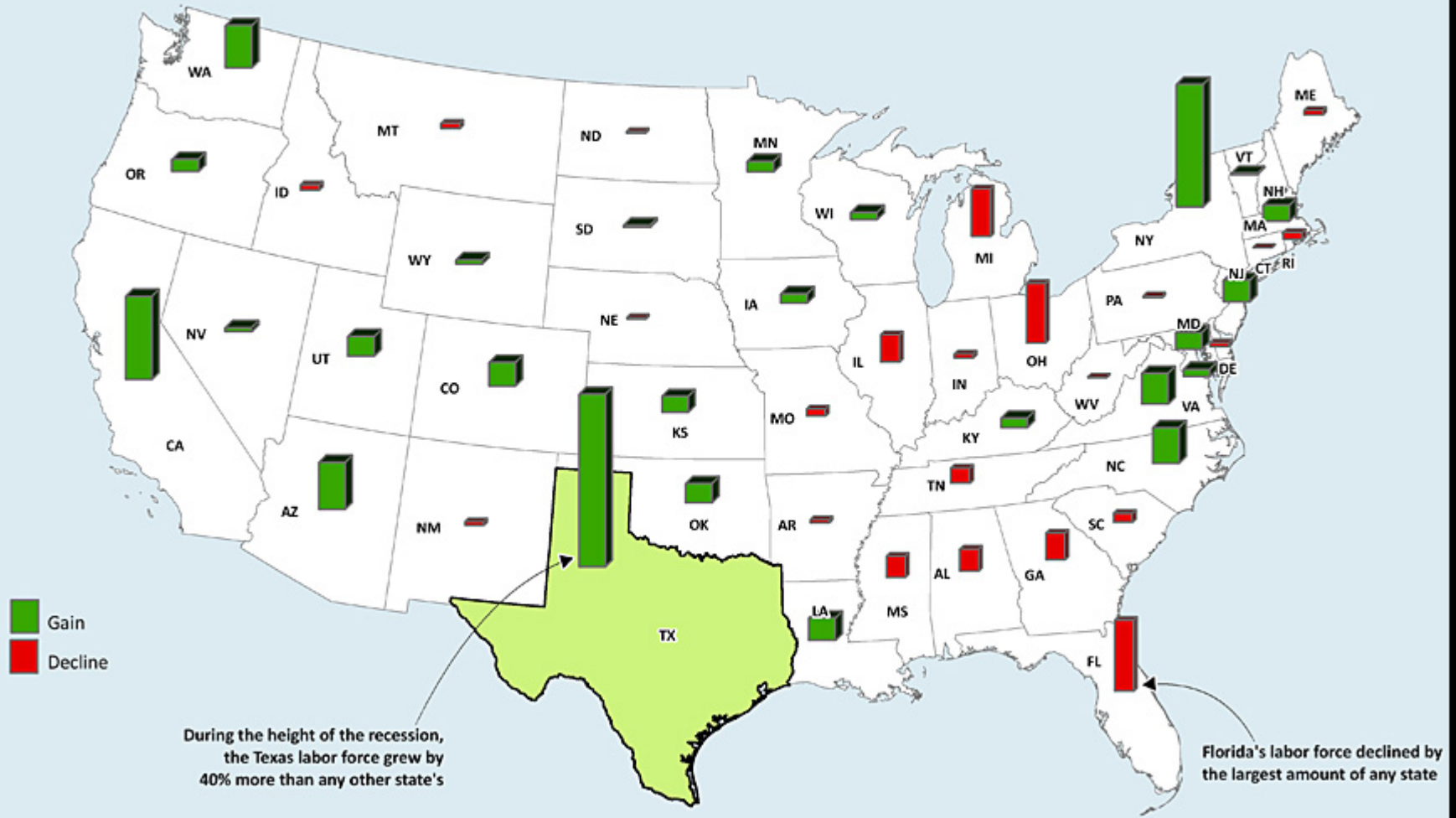


SOURCES: Bureau of Labor Statistics; Federal Reserve Bank of Dallas



Texas Labor Force Leads the Nation

Labor Force Growth by State, 2007-2009



FORTUNE 500 Companies in Texas

No state is home to more Fortune 500 corporate headquarters



EL PASO (1)
38 Western Refining

AUSTIN METRO (2)
5 Dell
34 Whole Foods Market

SAN ANTONIO (4)
4 Valero Energy
13 USAA
15 Tesoro
42 Clear Channel Media Holdings

DFW METRO (24)

1 ExxonMobil	23 Texas Instruments	43 Dr Pepper Snapple Grp.
3 AT&T	24 Southwest Airlines	44 Energy Transfer Equity
9 Fluor	26 Energy Future Holdings	46 Celanese
10 AMR (American Airlines)	27 Tenet Healthcare	47 Atmos Energy
11 Kimberly-Clark	28 GameStop	48 Holly
14 J.C. Penney	29 XTO Energy	54 Flowserve
17 Burlington Northern Santa Fe	37 Commercial Metals	55 RadioShack
22 Dean Foods	40 Affiliated Computer Svcs.	57 Blockbuster

PITTSBURG (1)
36 Pilgrim's Pride

HOUSTON METRO (25)

2 ConocoPhillips	31 Apache
6 Marathon Oil	32 CenterPoint Energy
7 Sysco	33 Smith International
8 Enterprise GP Holdings	35 Kinder Morgan
12 Plains All American Pipeline	39 Calpine
16 Halliburton	41 Enbridge Energy Partners
18 National Oilwell Varco	45 Cameron International
19 Continental Airlines	49 EOG Resources
20 KBR	50 Spectra Energy
21 Waste Management	51 El Paso
25 Baker Hughes	52 Group 1 Automotive
30 Anadarko Petroleum	53 FMC Technologies
	56 Frontier Oil

INDUSTRY CATEGORY

- Construction/Engineering
- Manufacturing/Processing
- Transportation
- Services
- Energy/Chemicals
- Retail/Wholesale
- Telecom

Office of the Governor
Economic Development and Tourism
Source: Fortune Magazine, May 2010



Case Study #3

The North Central Texas Region

- 9,105 square miles 16 counties, 230+ governments
- 6 million residents in 2010
- 4th largest region in the US
- 9 cities with more 100,000 residents
- Projected to add another 4.1 million residents by 2030
- 4.0 million jobs in 2010
- Another 2.3 million jobs projected to be added by 2030



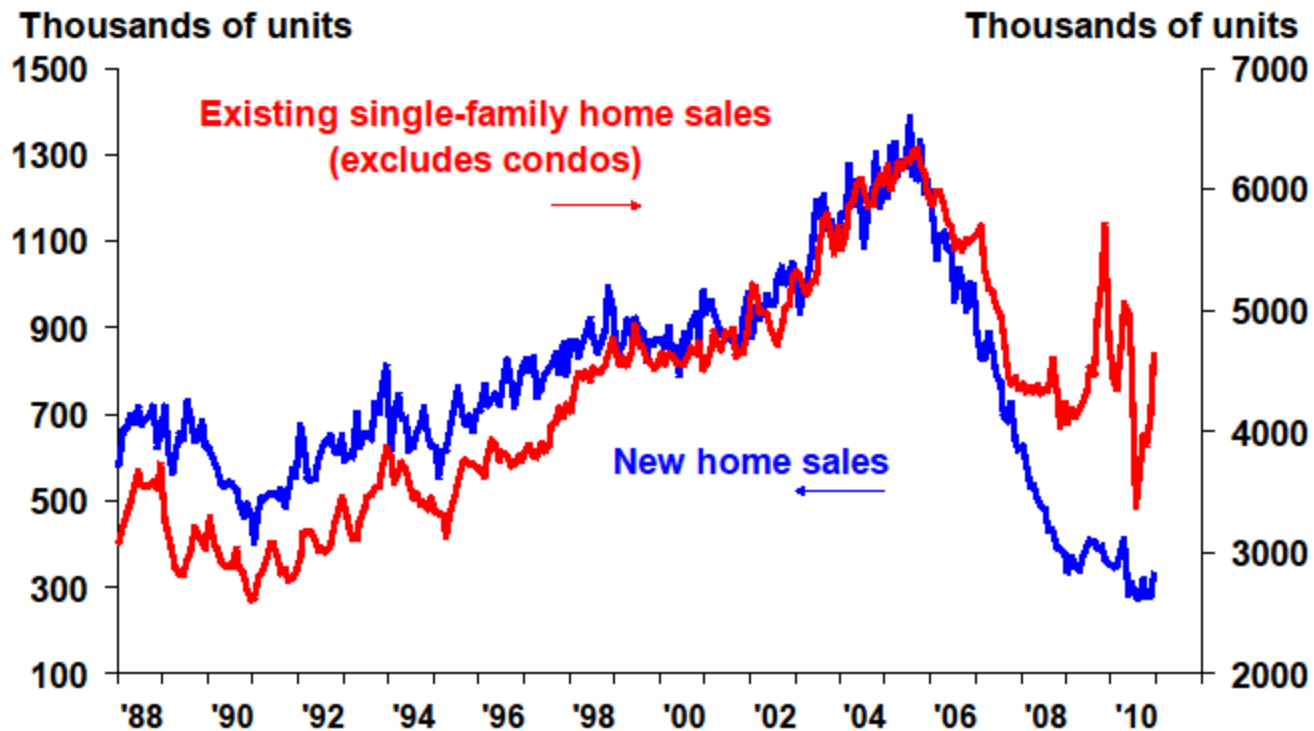
Case Study #4

Transwestern Realty

- >10 million sq ft LEED EBOM certified
- > 5 million more sq ft in process of leed certification
- Accounts for 1/3 of all LEED EBOM square footage certified at the national level



U.S. Home Sales



Note: Data are seasonally adjusted, annualized rates.

SOURCES: Census Bureau; National Association of Realtors.



III. Staying Relevant in Force X Winds

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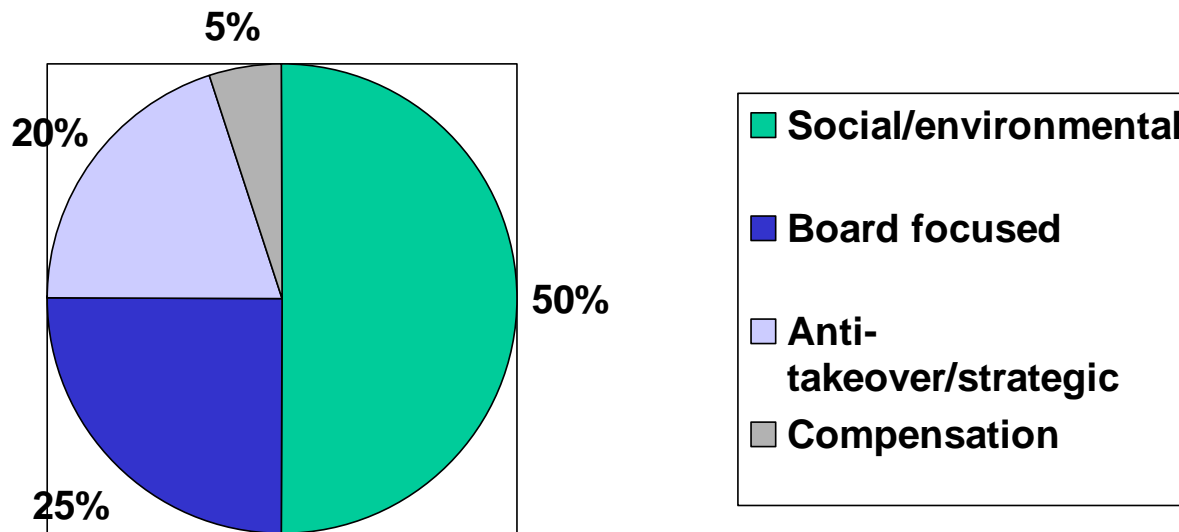
Green Ethos
Real Green
Deep Green



A Sea of Green?

In 2008 alone, the US Patent and Trademark Office registered
>300,000 trademarks
bearing the words
“green” or “eco”

Ernst & Young: Half of 2011 Shareholder Proposals will center on social/environmental issues





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Barry White
Got It Right:

“It ain’t what you got Babe/
Girl, it’s how you use it”



Blueprint For Success

- Understand and Position Green Features, Benefits and Applications of Your Product Or Services Portfolio
- Identify Design & EPC Firms/Specifiers/Sales Channels including Distributors & Reps
- Develop & Host AIA LU CPE Presentations/Lunch & learns
- Engage AIA/USGBC/APA/ASLA/BOMA Chapters



Conclusions

- BAU ~ LEED => code, CSR
- Follow the Money ~
 - Sustainable Commitments and Policies
 - Population and Job Growth
 - Construction Funding
- Stay Relevant ~ Sustainable ethos



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Contact

Laura Aune
Consulate General of Canada
500 North Akard Street, Suite 2900
Dallas, Texas 75201

Telephone: 214-721-1857
Cell: 214-837-7204
Facsimile: 214-922-9815
laura.aune@international.gc.ca