Memorandum

CITY OF DALLAS

DATE: June 10, 2010

TO: Members of the Budget, Finance & Audit Committee:
Jerry R. Allen (Chair), Ann Margolin (Vice-Chair), Vonciel Jones Hill,
Delia D. Jasso, Ron Natinsky, David A. Neumann

SUBJECT: Electricity Procurement Briefing

On Monday, June 14, 2010, you will be briefed on the Equipment and Building Services Electricity Procurement. The briefing material is attached for your review.

If you have questions or need additional information, please let me know.

Forest E. Turner
Assistant City Manager

cc: Honorable Mayor and Members of the City Council
Mary K. Suhm, City Manager
Deborah A. Watkins, City Secretary
Thomas P. Perkins, Jr., City Attorney
Craig D. Kinton, City Auditor
C. Victor Lander, Administrative Judge
Ryan S. Evans, First Assistant City Manager
A.C. Gonzalez, Assistant City Manager
Jill A. Jordan, P.E., Assistant City Manager
Jeanne Chipperfield, Chief Financial Officer
Frank Librio, Public Information Office
Helena Stevens-Thompson, Assistant to the City Manager

City of Dallas

Electricity Procurement

Budget Finance & Audit Committee

June 14, 2010

City of Dallas
Equipment & Building Services

Key Focus Area
E3
Efficient, Effective, Economical Government

Purpose

Review the City's electricity procurement program and upcoming contract for the period beginning January 1, 2011.

- How we buy electricity
- How well we did on our last procurement
- What we are proposing and why
- What are plans beyond this contract period
- Recommendations

Electricity Procurement

- How We Buy Electricity

Deregulation Structure Review

Generation (Competitive)

% Installed Capacity

Natural Gas, 59%

Coal, 22%

Wind, 11%

Nuclear, 7%

54% of Cost

Regulated Delivery (*Pass Through at Cost*)

Transmission

Substation

Distribution

ONCOR

35% of Cost

Retail Electric Provider (Competitive)

Customer Service
Billing
Scheduling

Wholesale Supply Contracts

9% of Cost

Taxes 2% of Cost

Customer

City of Dallas

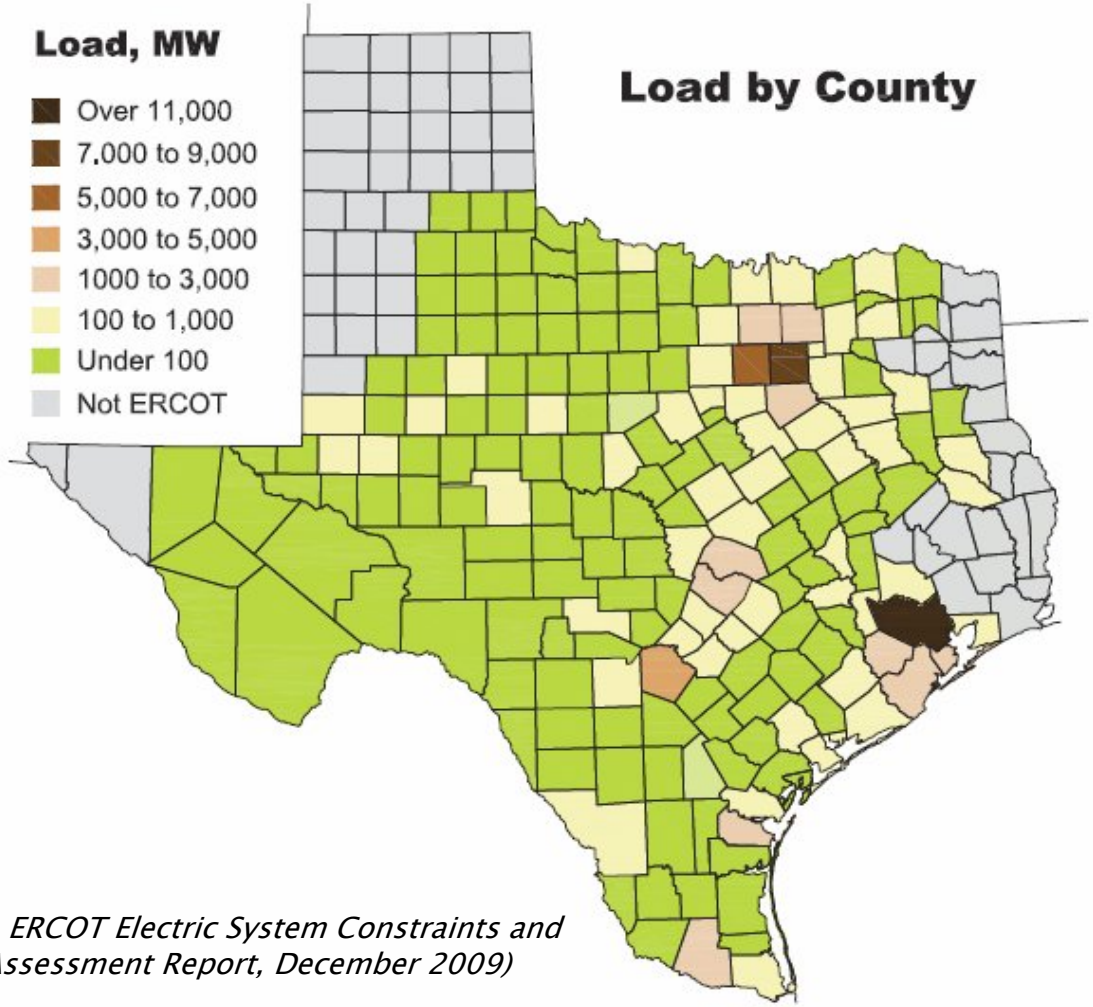
100% of Cost

Regional Load by County

Four counties total 48% of load in ERCOT:

1. Harris
2. Dallas
3. Tarrant
4. Bexar

City of Dallas is approximately 192MW, or 2% of Dallas County.



Source: ERCOT Electric System Constraints and Needs Assessment Report, December 2009)

Top 3 and Other Notable Users – North TX

	Electricity User	Million kWh/Yr	% Size Compared to City of Dallas
1	Texas Instruments	1,200	159.6%
2	Gerdau Ameristeel	1,000	133.0%
3	**City of Dallas**	**752**	**0.0%**
OTHERS	UT System (North Texas)	550	73.1%
	Nucor Steel	540	71.8%
	AT&T	450	59.8%
	Texas Health Resources	370	49.2%
	AMR (American Airlines)	300	37.2%
	City of Fort Worth	245	32.6%
	Dallas ISD	240	31.9%
	General Motors	240	31.9%
	HP (EDS)	190	25.3%
	Dallas County	120	16.0%
	City of Arlington	100	13.3%

**Energy usage is estimated only.*

City of Dallas Electricity Use

- 2,600 accounts (includes 800+ buildings, 1500 traffic signals, outdoor lights, etc.) and 752 million kWh/Yr
  (enough to power 41,000 single family households)
- Consumption by Department (percentages by volumes)

Water	55%
Public Works (Includes streetlights and traffic signals)	12%
Parks	6%
Office of Cultural Affairs	5%
Aviation	5%
Equipment and Building Services (includes multi-use buildings, e.g. City Hall, OCMC, Courts)	5%
Police and Fire	4%
Convention Center	4%
Library	2%
Other	2%

City's Procurement Process History

Pre-Deregulation
Purchased from TXU Electric
Regulated Utility

January 1, 2002
Texas Deregulated Electricity Market Opens.

April 2006
Council Voted to Opt out of P3 Effective Dec'07

2008 – 2010
City Procured with assistance from Energy Consultants

<2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010

August 2001
Joined Public Power Pool (P3)

2002 - 2007
Purchased Power through P3 Aggregation Group

Dec 9, 2010
Council Approved Priority Power Management, LLC to as consultant for upcoming procurement.

Consultant Selection & Qualifications

- Request for Qualifications advertised August 2009
- 10 Firms submitted proposals with 5 firms short-listed
  - Qualifications and Experience
  - Project understanding and approach
  - Past Performance
  - MWBE
- Requested cost proposals in October 2009
  - Priority Power Management, LLC
  - R.W. Beck
- Contract with Priority Power Management, LLC approved by Council on Dec. 9, 2009 (Resolution #09-2943)

Consultant Selection & Qualifications

- Priority Power Management, LLC Qualifications
  - Staff has over 250 years of combined experience in energy markets
  - Procurement and management of an estimated $1 billion in annual energy spending
  - Managing power requirements for 32 of Top 100 Texas independent oil and gas producers
  - Notable clients include: Chesapeake Energy, Hunt Oil Company, Devon Energy, Texas Health Resources, University of Texas System and City of Midland

City's Procurement Process

- Use independent consultant for specialized expertise
- Analyze data and develop specification
- Use a competitive RFP process with Business Development & Procurement
  - 972 total contacts including:
    - 138 Retail Electricity Providers (All REPs in Texas)
    - 104 MWBEs

City's Procurement Process *(continued)*

- Evaluate proposals and short list firms based on:
  - Financial stability – 25%
  - Invoicing capability including electronic invoicing – 20%
  - MWBE participation – 15%
  - Agreement to contract terms – 10%
  - Level of experience – 10%
  - Product experience – 10%
  - Ability to provide renewable energy credits – 5%
  - Customer service – 5%
- Prepare contract documents for short-listed firms.

City's Procurement Process *(continued)*

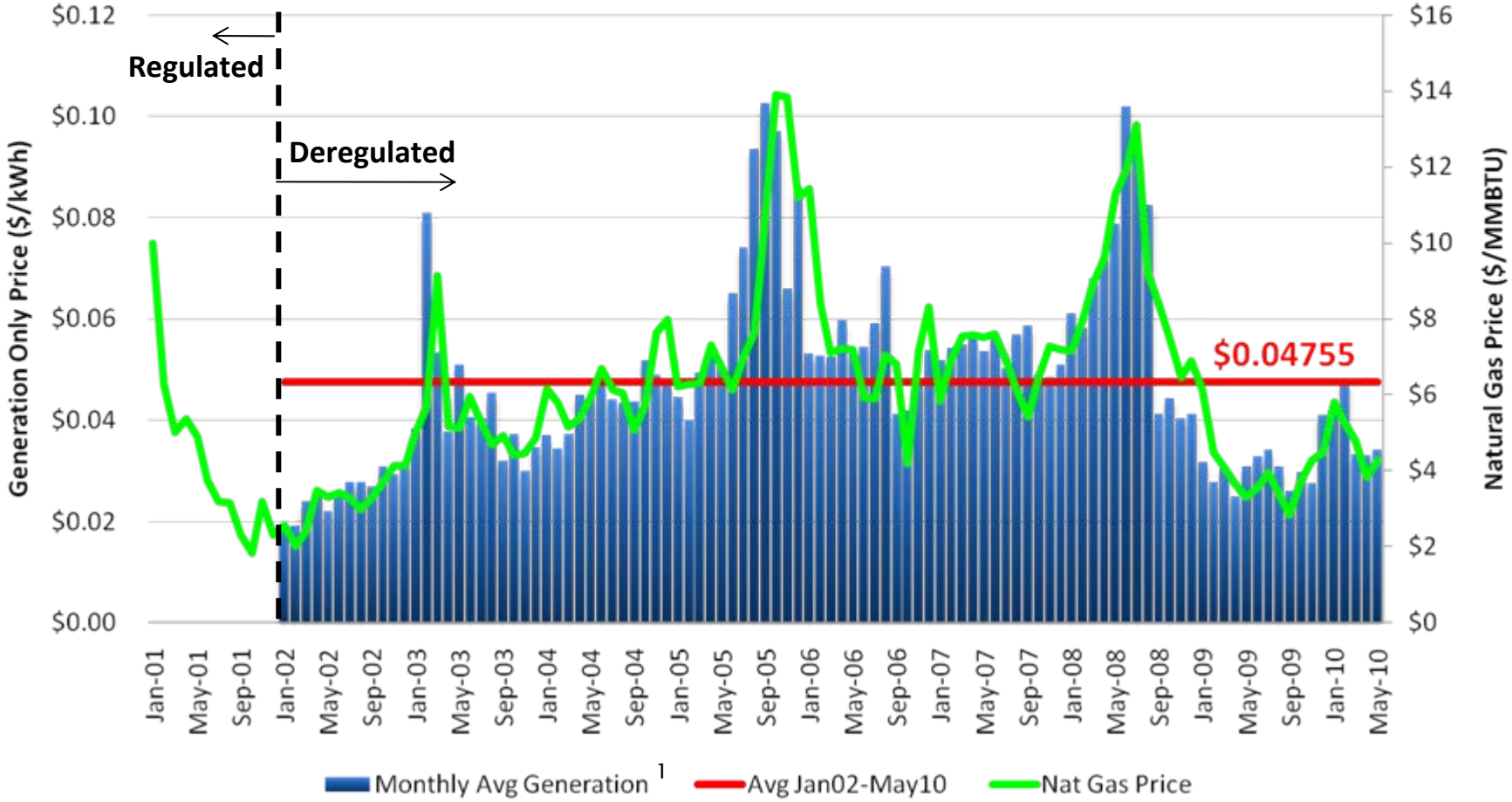
- City Council authorizes the City Manager to enter into contract
  - Accept best and final offers
  - Determine most advantageous offer to the City
    - Total delivered cost of power – 70%
    - Final contract terms – 20%
    - Invoicing requirements – 10%
  - Execute the contract (Completed on day of offer while commodity market is open)
- REP enters into third party agreements to secure wholesale electricity supply to serve City load.

Electricity Procurement

- How well we did on our last procurement

Historical Generation Costs

Natural Gas Prices are the Primary Driver of the trends in electricity prices.



1. *Monthly average generation price is derived by the actual simple average of the ERCOT north zone market clearing price of energy (MCPE) multiplied by a City of Dallas load shaping factor of 1.035.*

What did we do?

- On August 27, 2008, Council approved strategy and authorized City Manager to enter into contract
- City Manager accepted Best and Final Offers and executed the contract on September 26, 2008
- Current contract for 2009, 2010 with GDF SUEZ Energy Resources

What did we do?

- Contract was a Load-Following Heat Rate
  - Supplier provides a price that fluctuates with the price of natural gas (until locked) for the entire estimated load within a bandwidth of +/-10%
  - Strategy approved by Council on August 27, 2008 provided guidelines for locking natural gas prices
    - Fixed trigger points were +15% and -30%
    - Limits allowed us to take advantage of declining prices while limiting exposure to increasing prices

Multiple Products to Consider

Volume	**Load Following** Total estimated quantities of power	**Blocks** Wholesale defined time periods and quantities of power
Price	**Fixed Price** Price is set and does not change	**Index** Price changes with market prices Heat Rate / MCPE

Product Selection Considerations

Risk Tolerance & Procurement Strategies

HIGH

Risk Tolerance

Index 100% of Load

- Completely subject to market price variations
- Retain ability to lock fixed price for all or portions of the load.

Active Trading

- Actively trying to beat the market
- Very resource Intensive

Fixed Price

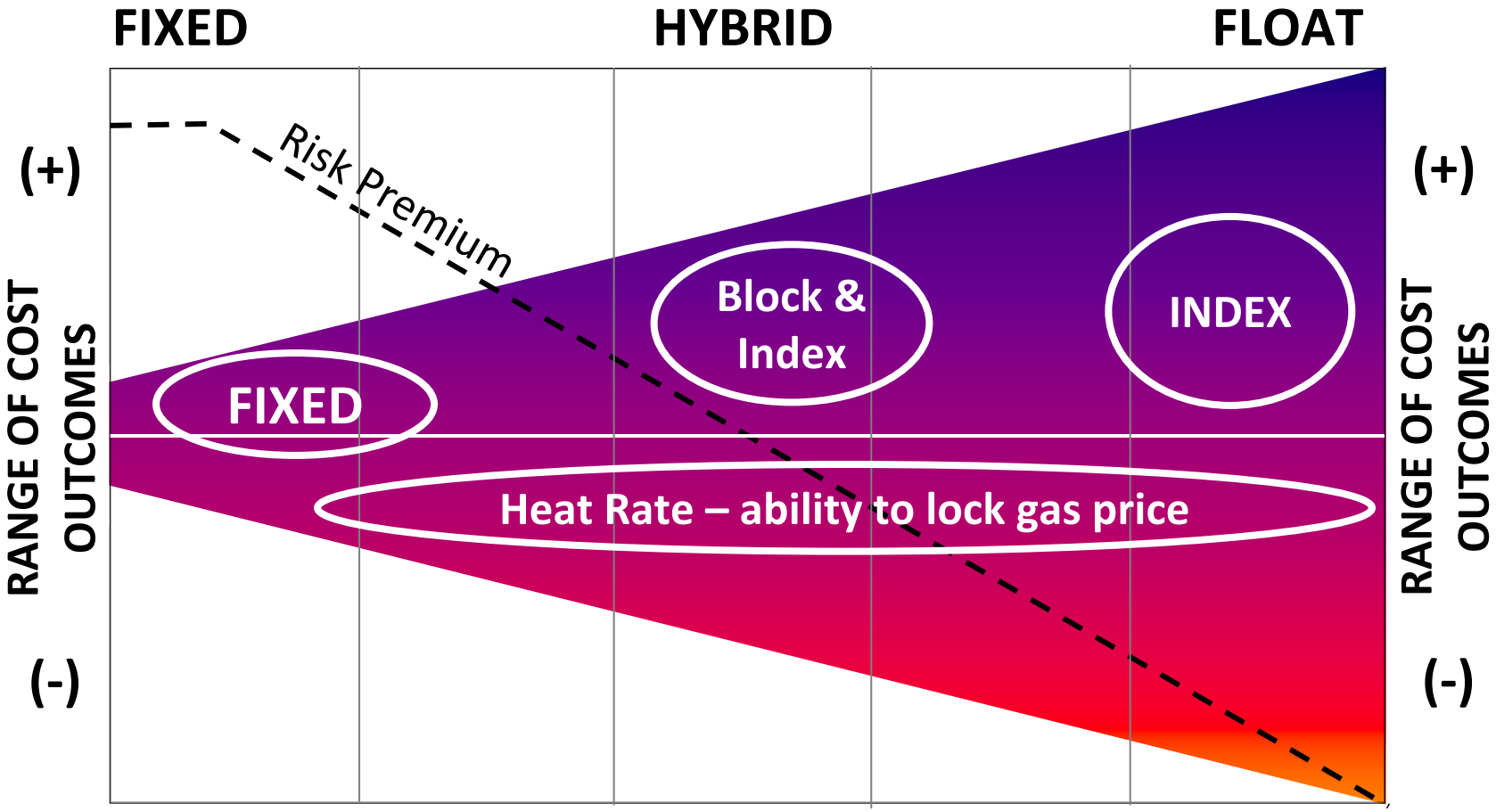
- Not exposed to market variations.
- Budget certainty.
- Price is 100% dependent on market conditions at time of purchase.

Defined Lock Strategy

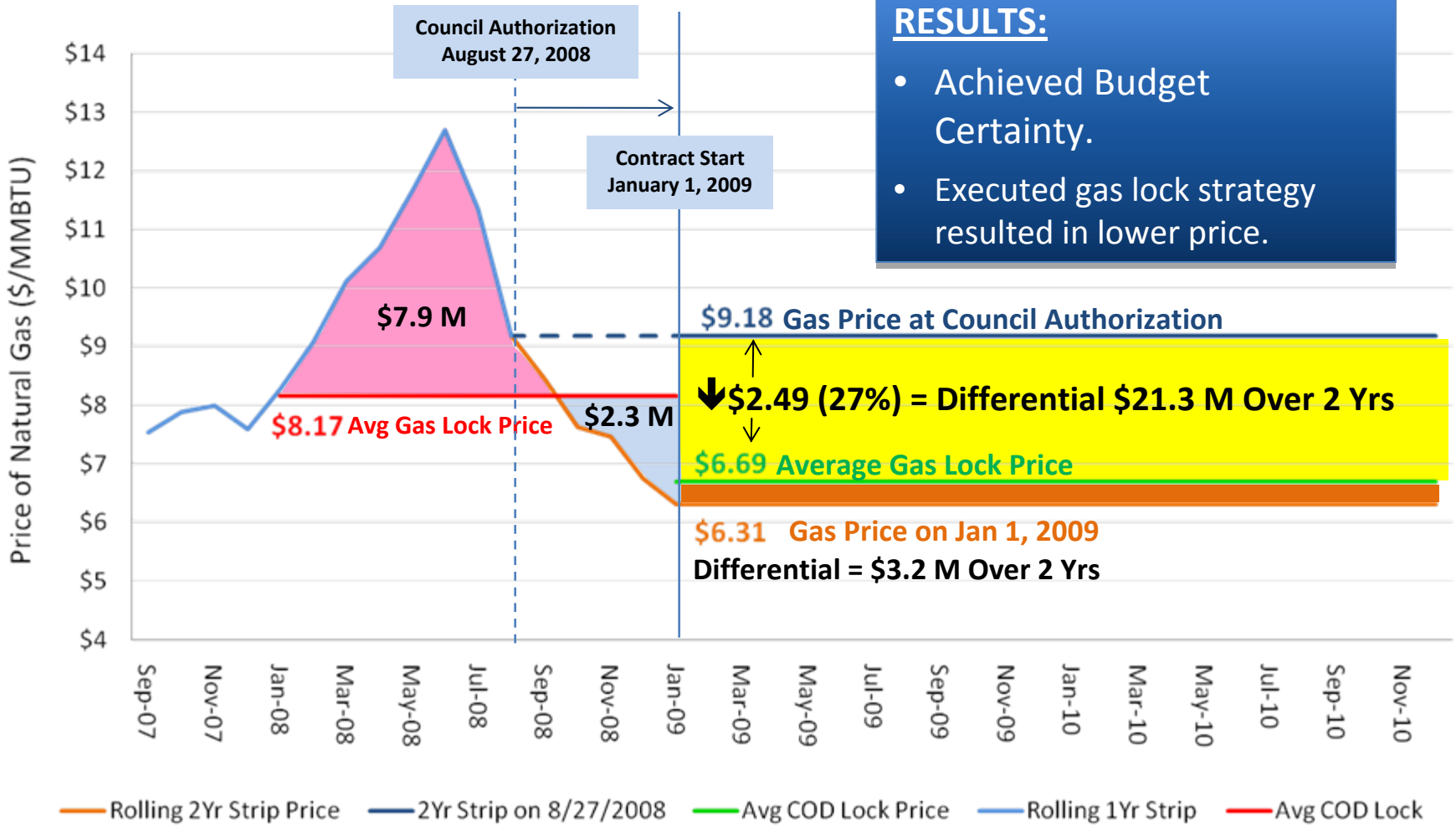
- Define specific objectives
- Develop quantifiable plan
- Strictly adhere to plan

LOW ← Proactiveness → HIGH

Risk vs. Reward Spectrum



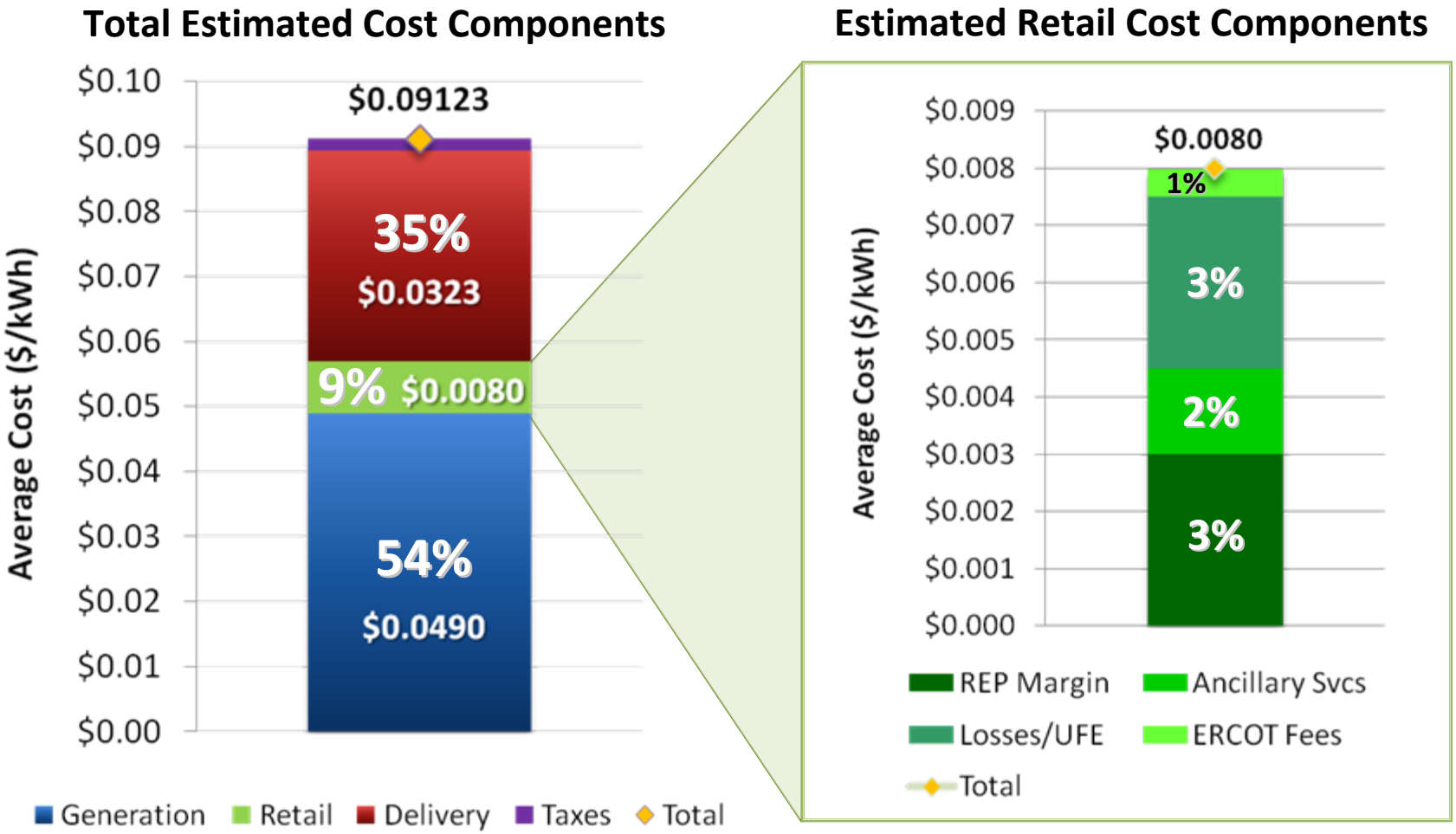
How Well Did We Do?



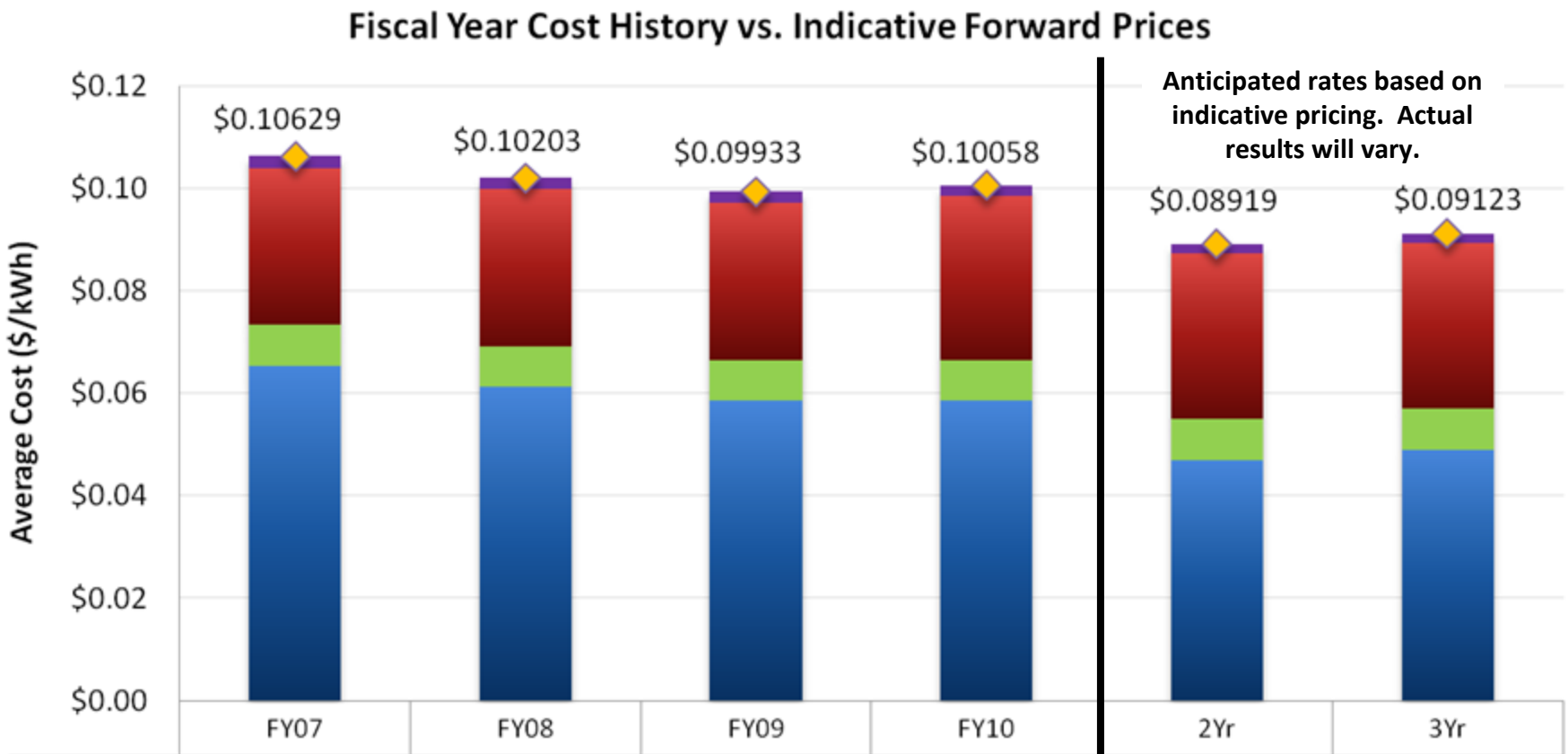
RESULTS:

- Achieved Budget Certainty.
- Executed gas lock strategy resulted in lower price.

Electricity Cost Components



City's Electricity Cost History



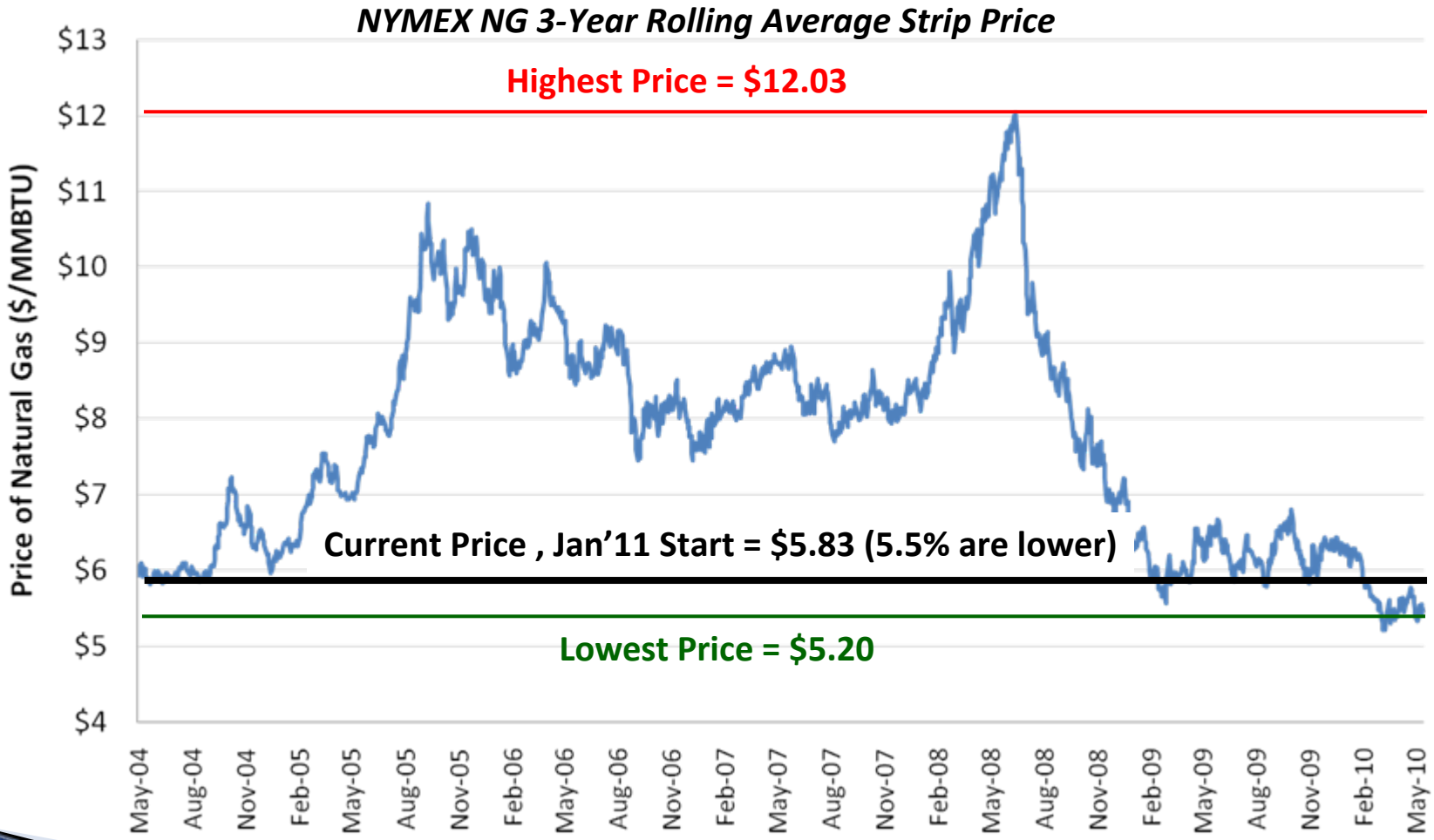
	FY07	FY08	FY09	FY10	2Yr	3Yr
Taxes	$0.00225	$0.00216	$0.00210	$0.00213	$0.00189	$0.00193
Delivery	$0.03071	$0.03065	$0.03070	$0.03192	$0.03230	$0.03230
Retail	$0.00800	$0.00800	$0.00800	$0.00800	$0.00800	$0.00800
Generation	$0.06532	$0.06122	$0.05853	$0.05853	$0.04700	$0.04900
Total	$0.10629	$0.10203	$0.09933	$0.10058	$0.08919	$0.09123

Electricity Procurement

- What we are proposing and why

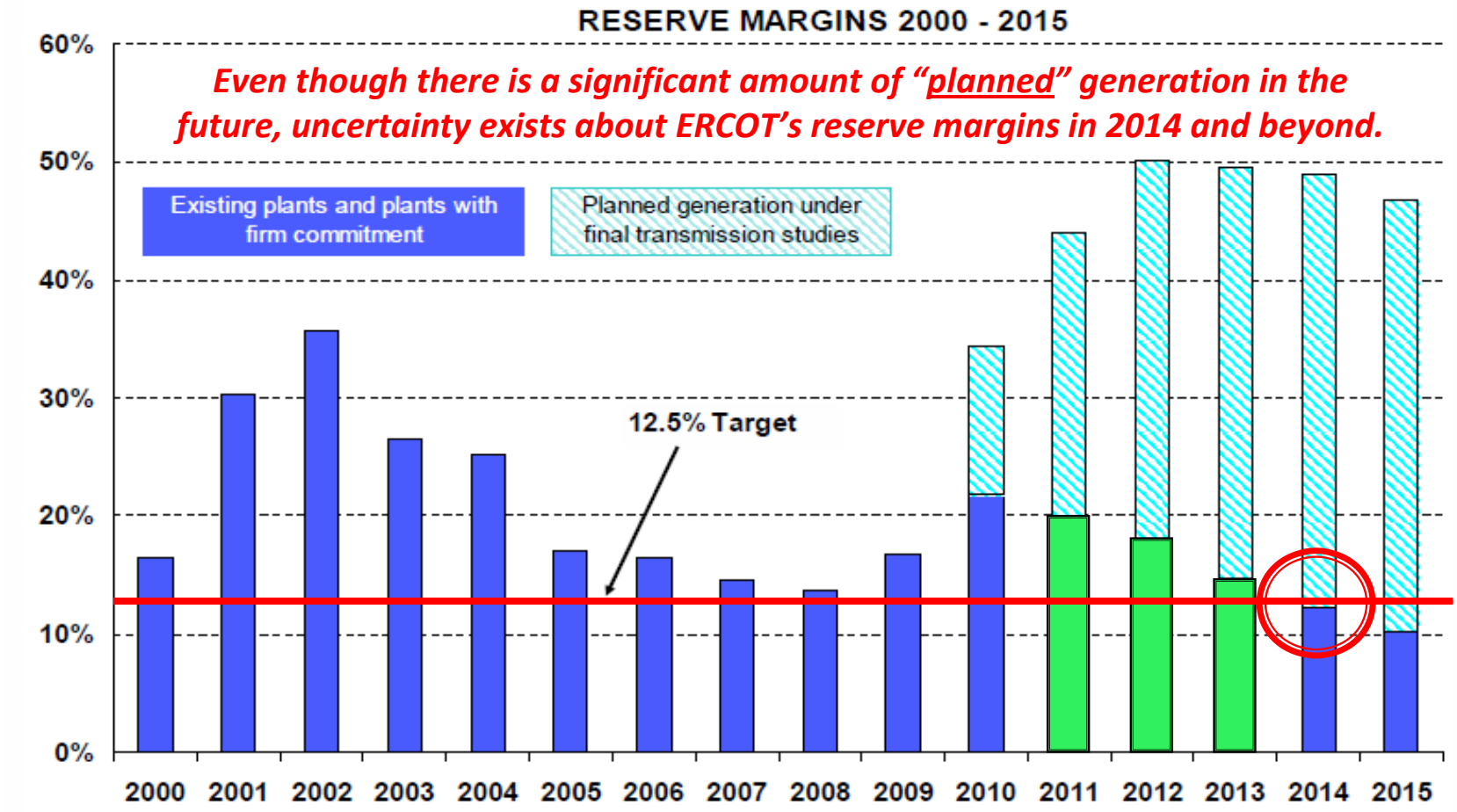
Recommendation: 3-Year Fixed Price

Reason #1: Prices are near a 6-Year Low



Recommendation: 3-Year Fixed Price

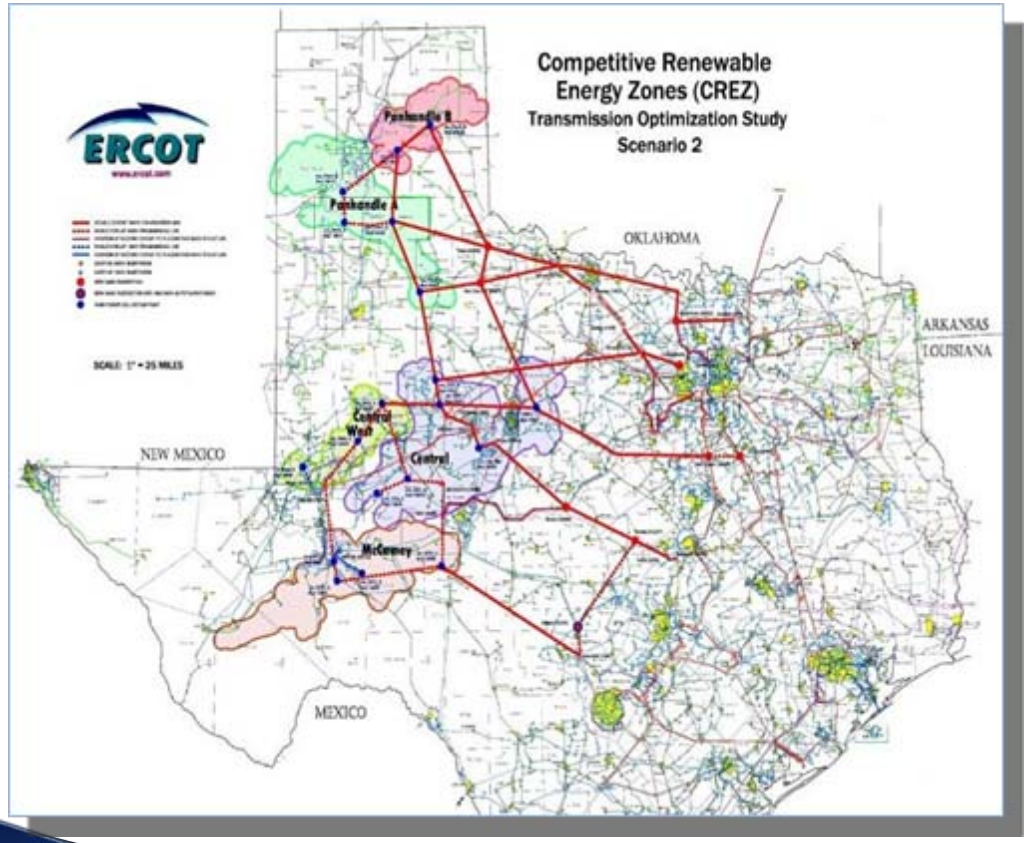
Reason #2: ERCOT Reserve Margin Capacity is Uncertain 2014

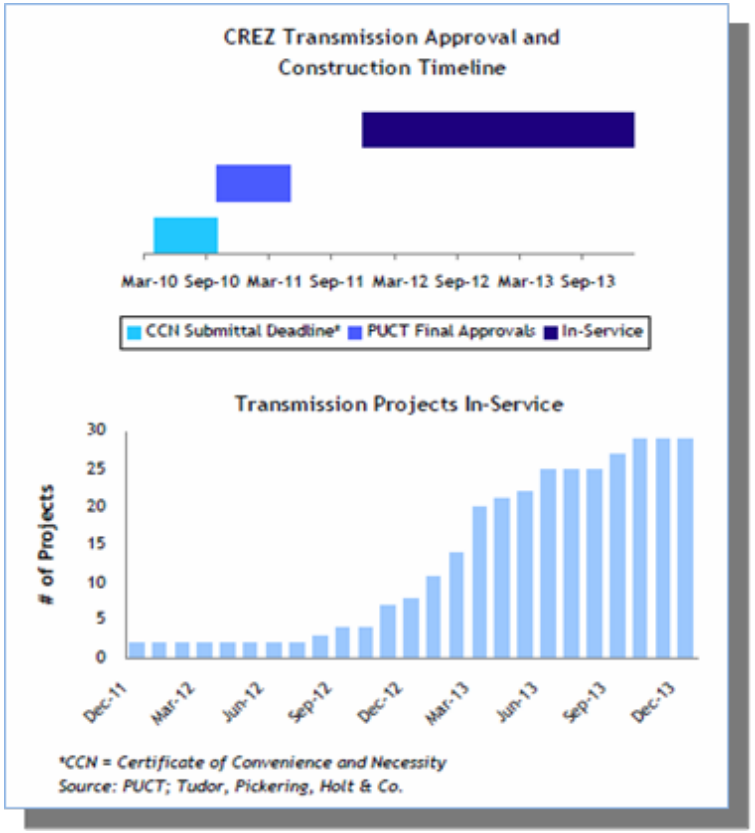


Recommendation: 3-Year Fixed Price

Reason #3: WTX Wind Power Begins to Flow into NTX in 2014

PUCT approved $5+ billion CREZ Project to build transmission lines to connect west Texas wind farms into higher demand areas such as Dallas/Fort Worth with expected completion in Dec 2013.





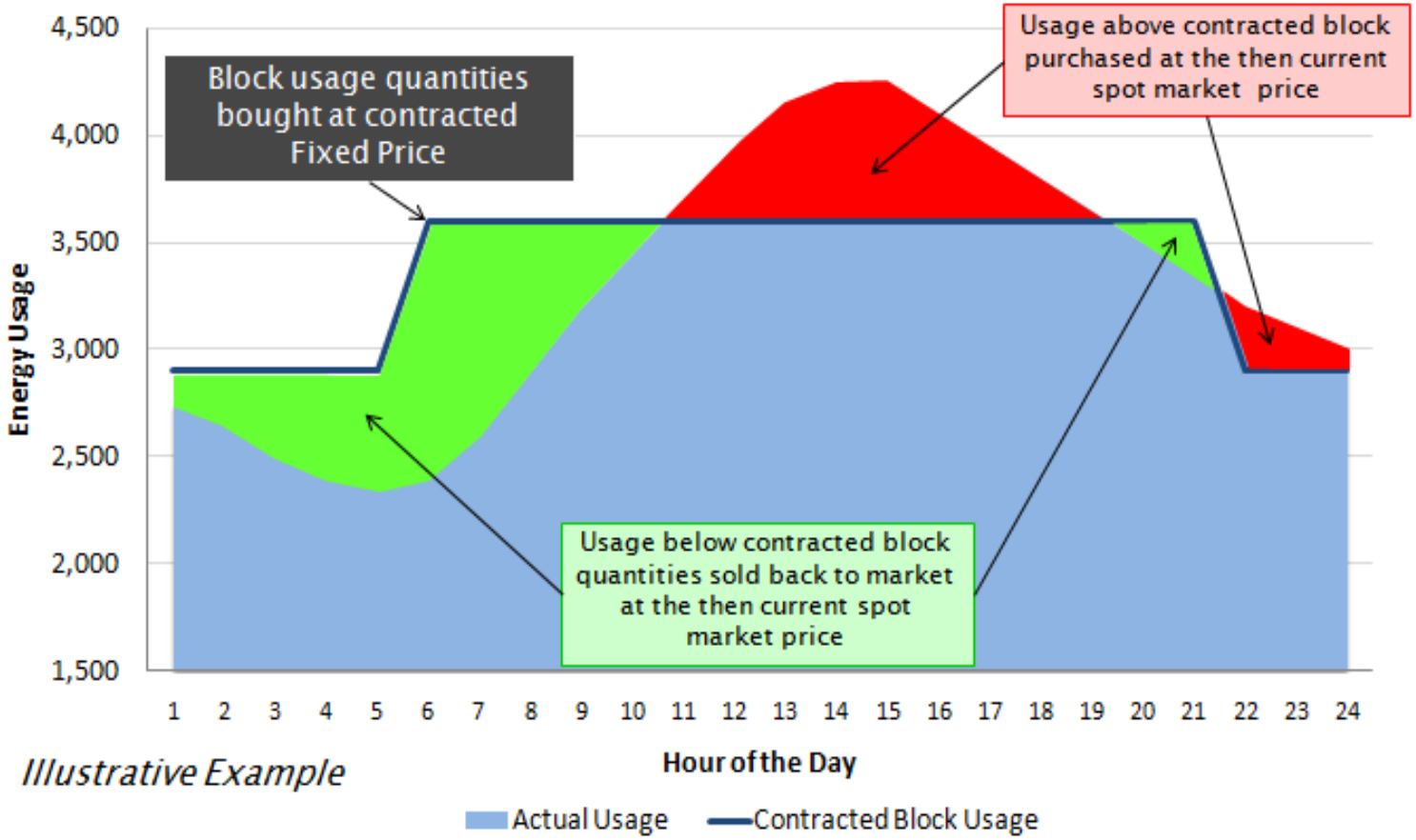
Source: ERCOT and the Public Utility Commission of Texas

Recommendation: Two Acct Groups

- Accounts defined in two groups to facilitate pricing
  - **Group 1** - Large users such as DWU, City Hall, Convention Center (75% volume) on 15 minute profile meters
  - **Group 2** – Most buildings, streetlights, traffic signals (25% volume) on monthly meters or unmetered

Recommendation: Group 1-Shaped Blocks

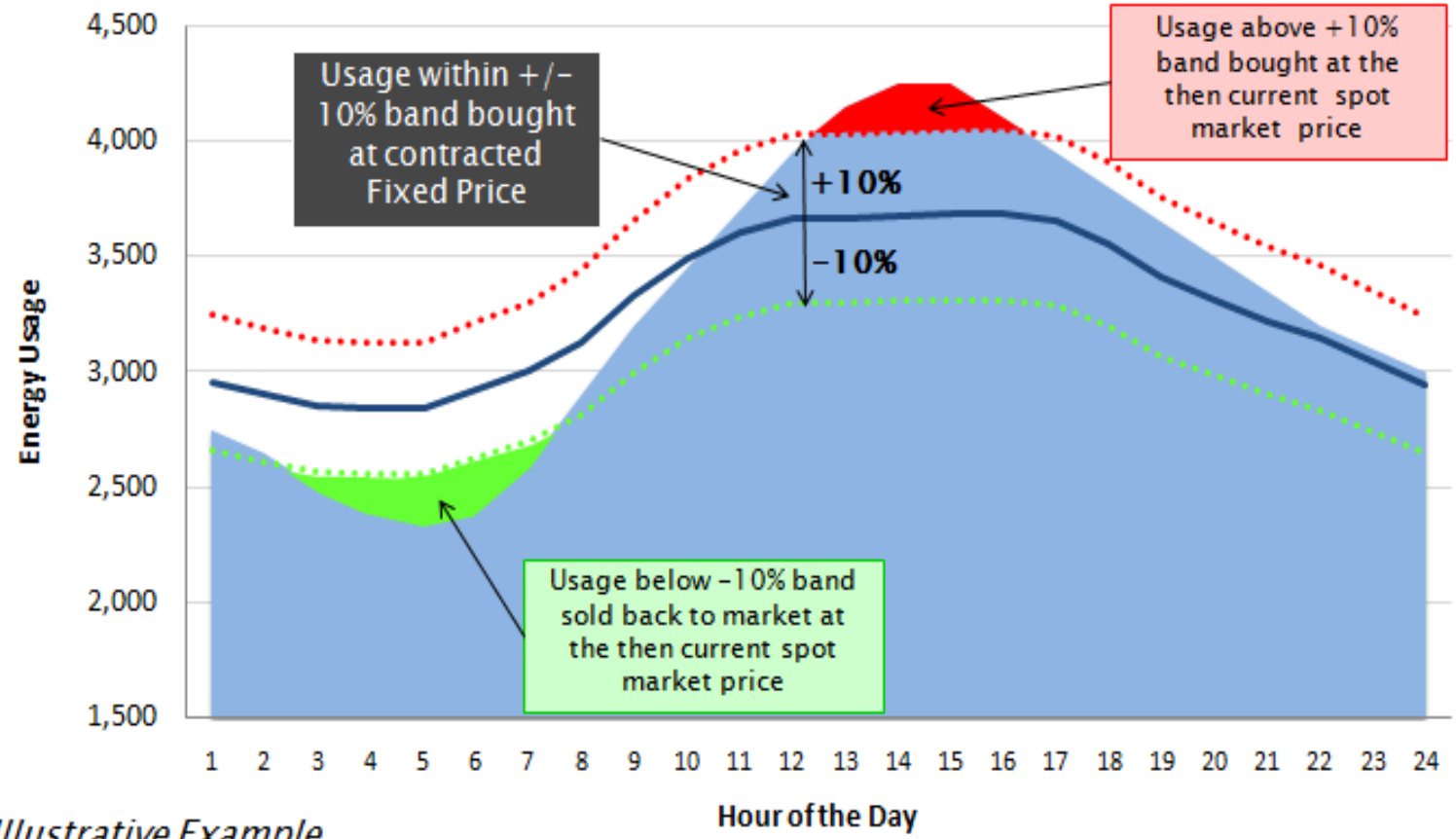
Fixed Price Block - supplier provides a fixed price for predetermined blocks of power. Blocks are sized at approximately 96% of total load with excess and or deficiencies bought and sold at market spot price.



Illustrative Example

Recommendation: Group 2 – Load Following

Load Following Fixed Price - supplier provides a fixed price for the entire estimated load within a bandwidth of +/-10%. Any usage outside of the bandwidth is bought and or sold at the market spot price.



Illustrative Example

Recommendation: 40% Texas Renewable Energy Credits

- Option of 20, 40 or 60 percent of load
- Dallas is #2 on EPA Top 20 Local Government list:

Local Govt List	Million kWh/Yr of RECs	% Total Volume
Houston	438	34%
Dallas	**333**	**40%**
Chicago	214	20%
Montgomery County Clean Energy Buyers Group	161	30%
Washington Suburban Sanitary Commission	70	33%

Recommendation: 40% Texas Renewable Energy Credits

- Today's Cost at 40% – $950K per year
- Estimated Cost Going Forward:
  - Cost increment for 20% renewable energy - $250K to $550K per year
  - Cost increment for 40% renewable energy - $500K to $1.1M per year
  - Cost increment for 60% renewable energy - $750K to $1.6M per year

Recommendation: 40% Texas Renewable Energy Credits

Why Buy Them?

- Environmental benefits to improve air quality
  - 40% renewable energy results in reduction of pollutants
    - 225,000 ton reduction in carbon dioxide (CO2) per year
    - 250 ton reduction of nitrogen oxide (NOx) per year
  - Reduction in pollutant tonnage can be submitted as a potential strategy on the State Implementation Plan (SIP) to get the region out of non-attainment status on the EPA standard for ozone

Recommendation: 40% Texas Renewable Energy Credits

Why Buy Them?

- Economic benefits to fund projects and grow tax base
  - Potential loss of highway and/or grant funds if fail to meet EPA ozone standards
  - Attract business relocation
    - "Poor air quality" was one stated reason Toyota did not locate in Dallas
  - Attract visitors
    - Convention organizers consider green initiatives when choosing locations

Recommendation: 40% Texas Renewable Energy Credits

Why Buy Them?

- Continue green leadership and receipt of national recognition/awards
  - In 2006, the Mayor of Dallas signed U.S. Mayors Climate Change Agreement along with mayors from around the country to reduce greenhouse gas emissions by 7% below 1990 levels by the year 2012
  - Receive points toward LEED building certifications
  - Bolster Dallas image with recognition/awards from Environmental Protection Agency, National Resources Defense Council, State Energy Conservation Office and the Texas Energy Partnership for energy efficiency

Recommendation Recap

- 3 year Contract Term
- Fixed Price Electricity
  - Group 1 – Fixed Price Block
  - Group 2 – Load Following Fixed Price
- 40% Texas renewable energy credits

Contract Provisions

- Fixed Price Block for Group 1
- Load Following Fixed Price for Group 2
- 20, 40 or 60 percent renewable energy
- 24 or 36 month term
- 30 day payment terms
- Automated billing

Contract Provisions *(continued)*

- No termination for convenience
  - Termination payment = Costs + (Contract Value – Market Value)
  - REP is financially committed to third parties for load
  - A drop in price leaves no market to sell our load
  - Termination could cost millions of dollars

Procurement Process Update

- Seven REPs were short-listed to submit final offers
  - Constellation New Energy, Inc.
  - GDF SUEZ Energy Resources NA, Inc.
  - Gexa Energy, L.P.
  - Reliant Energy Retail Services, LLC
  - Sempra Energy Solutions, LLC
  - Texas General Land Office
  - TXU Energy Retail Company, LLC

Procurement Process – Next Steps

- City Council authorizes the City Manager to enter into contract
  - Accept best and final offers
  - Determine most advantageous offer to the City
    - Total delivered cost of power – 70%
    - Final contract terms – 20%
    - Invoicing requirements – 10%
    - Request MWBE documentation from selected REP
  - Execute the contract (Completed on day of offer while commodity market open)

Electricity Procurement

- What are plans beyond this contract period

Future Plans

- Continue analysis of City becoming a self-serving Retail Electric Provider:
  - It will take at least 12 months to prepare for becoming self-serving REP
  - Annual savings are estimated to be $4.4M of which GF is $1.9M once implemented
- Long term consideration could examine options to enlarge the customer base beyond City-owned facilities
- The City could consider expanding its interest in power generation:
  - Currently Dallas Water Utilities is constructing a facility that generates power from methane gas at the Southside WWTP
  - Potential investment in facilities such as wind farms

Electricity Procurement

- Recommendations

Recommendations Summary

- City Council authorize the City Manager to accept best and final offers from the seven short-listed REPs and enter into Electric Supply Agreement(s) determined to be most advantageous to the City
  - Group 1 – Fixed Price Block
  - Group 2 – Load Following Fixed Price
  - Include 40% Texas Renewable Energy Credits
  - 36 month term

Electricity Procurement

» Appendix

Meter Groupings and Definitions

- Meters/accounts are grouped so that best energy product is targeted for each group to achieve best price and conservation incentives
- Group 1- 84 meters, 75% of total load
  - **Interval Data Recorder (IDR)** – records total use and rate of use every 15 minutes (ex. DWU, City Hall, Convention Center)
- Group 2 - 2512 Meters, 25% of total load
  - **Demand Meter** – records total use and highest rate of use in a 15 minute period during billing period (ex. Libraries, Recreation Centers, Police Facilities)
  - **Non-Demand Meter** – records total use only and does not provide information on peak use or breakdown of use over billing period (ex. Traffic lights and warning signs)
  - **Unmetered** – electric charges are based solely on expected use (ex. Streetlights)

Electricity "Product" Definitions

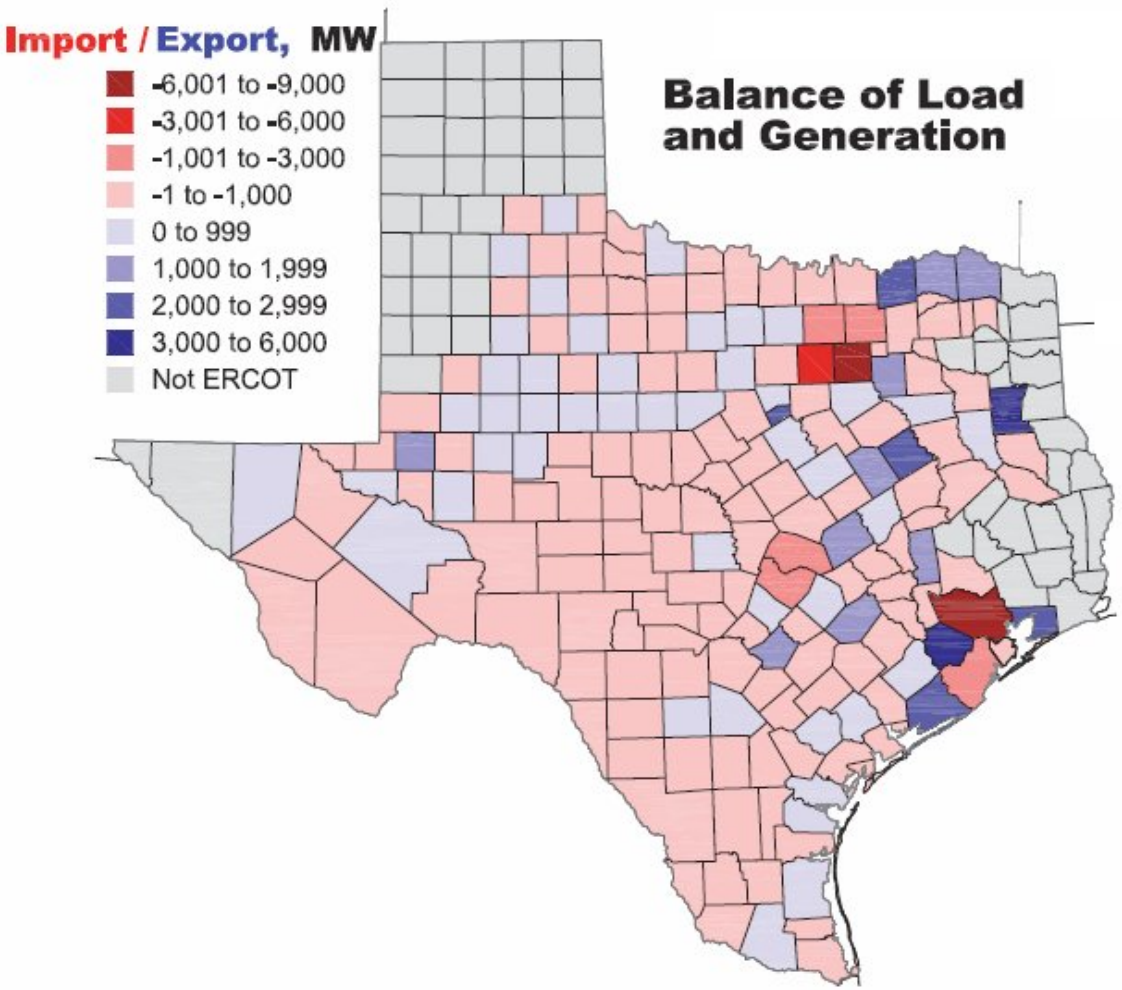
- There are a variety of electricity pricing offerings in the market
  - **Load Following Fixed Price** – supplier provides a fixed price for the entire estimated load within a bandwidth of +/-10%
  - **Load Following Heat Rate** – supplier provides a price that fluctuates with the price of natural gas for the entire estimated load within a bandwidth of +/-10%
  - **Fixed Price Blocks** – supplier provides a fixed price for predetermined blocks of power
  - **Heat Rate Blocks** – supplier provides a price for blocks of power that fluctuate with the price of natural gas
- Currently, Dallas uses Load Following Heat Rate pricing

Balance of Load and Generation

The map to the right illustrates the balance of load and generation within each county in the ERCOT Region for the summer of 2009.

A county with more generation than load will export generation to other counties; comparatively, a county with more load than generation will import generation from other counties.

Please note this map is for general illustrative purposes only, however it clearly shows that the Dallas/Fort Worth area, the Houston area, and the Austin/Round Rock area are importers and dependent on transmission to serve load.



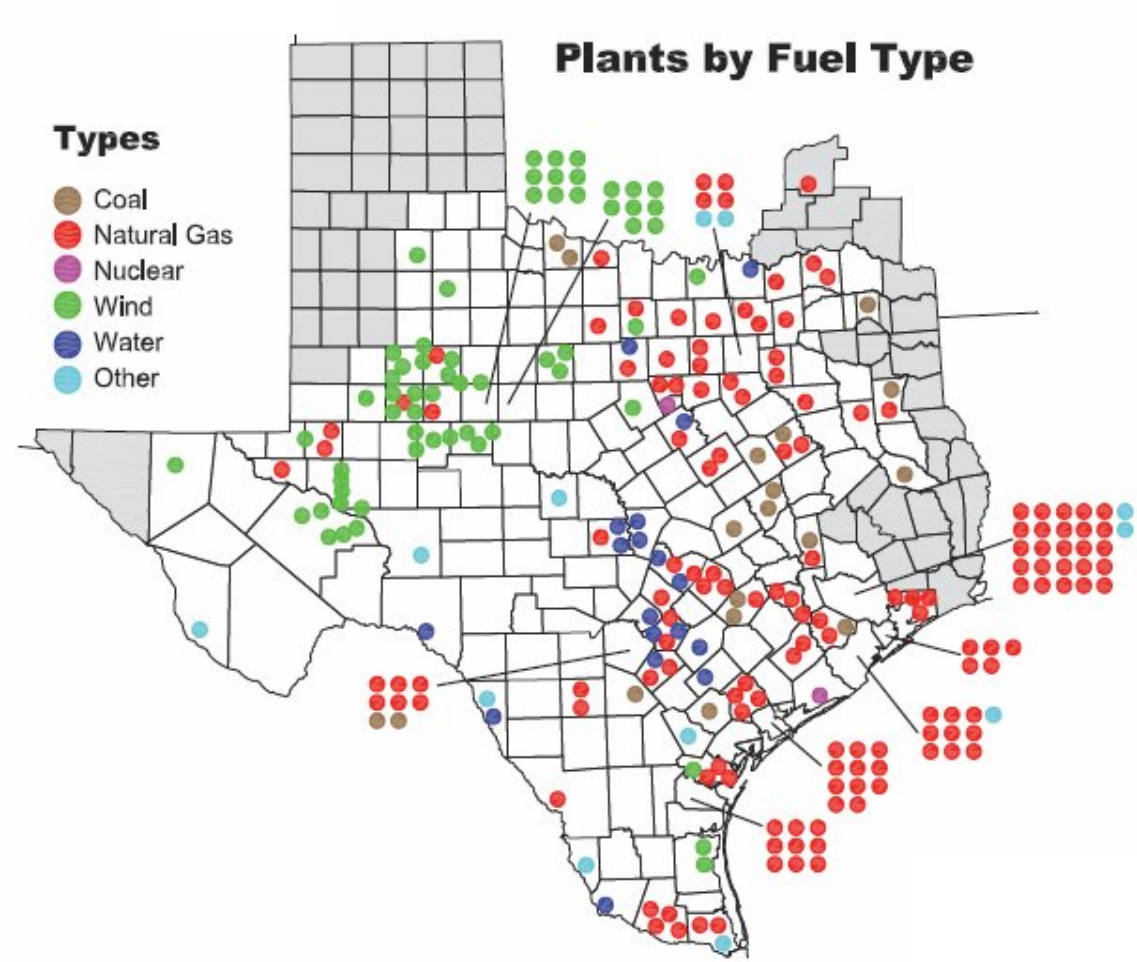
Source: ERCOT Electric System Constraints and Needs Assessment Report, December 2009)

ERCOT Generation

Current installed generation capacity in the ERCOT Region is about 84,000 MW, which includes about 3,000 MW of generation that has suspended operations or been "mothballed".

In terms of energy produced within ERCOT in 2008, approximately 43% was fueled by natural gas, followed by coal at 37%, nuclear at 13% and wind at 5%.

The map to the right is an indicator of generating facilities across the region by fuel type.



Source: ERCOT Electric System Constraints and Needs Assessment Report, December 2009)