

# Memorandum



DATE: November 30, 2012

TO: Honorable Members of the Budget, Finance, and Audit Committee: Jerry R. Allen (Chair), Tennell Atkins (Vice Chair), Monica R. Alonzo, Scott Griggs, Ann Margolin

SUBJECT: Electricity Procurement

Attached is the Electricity Procurement – Equipment and Building Services Briefing to be presented by the Equipment and Building Services Department at the December 3, 2012 meeting of the Budget, Finance, and Audit Committee.

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



Forest E. Turner  
Assistant City Manager

Attachment

c: Honorable Mayor and Members of the City Council  
Mary K. Suhm, City Manager  
Rosa A. Rios, City Secretary  
Thomas P. Perkins, Jr., City Attorney  
Craig D. Kinton, City Auditor  
Daniel F. Solis, Administrative Judge  
A.C. Gonzalez, First Assistant City Manager  
Ryan S. Evans, Assistant City Manager  
Jill A. Jordan, P.E., Assistant City Manager  
Joey Zapata, Assistant City Manager  
Jeanne Chipperfield, Chief Financial Officer  
Edward Scott, City Controller  
Stephanie Pegues-Cooper, Assistant to the City Manager  
Errick Thompson, P.E., Director of Equipment and Building Services

# Electricity Procurement

Budget, Finance and Audit Committee  
December 3, 2012



Discuss an opportunity to protect the City against rising electricity prices and implement high efficiency lighting retrofits through an extension of our current electricity contract

# Briefing Outline



City of Dallas

- ▶ Current Contract
- ▶ Cost Outlook for Electricity
- ▶ Proposal
- ▶ Recommendations

City entered into current agreement with TXU Energy Retail Company LLC on July 7, 2010

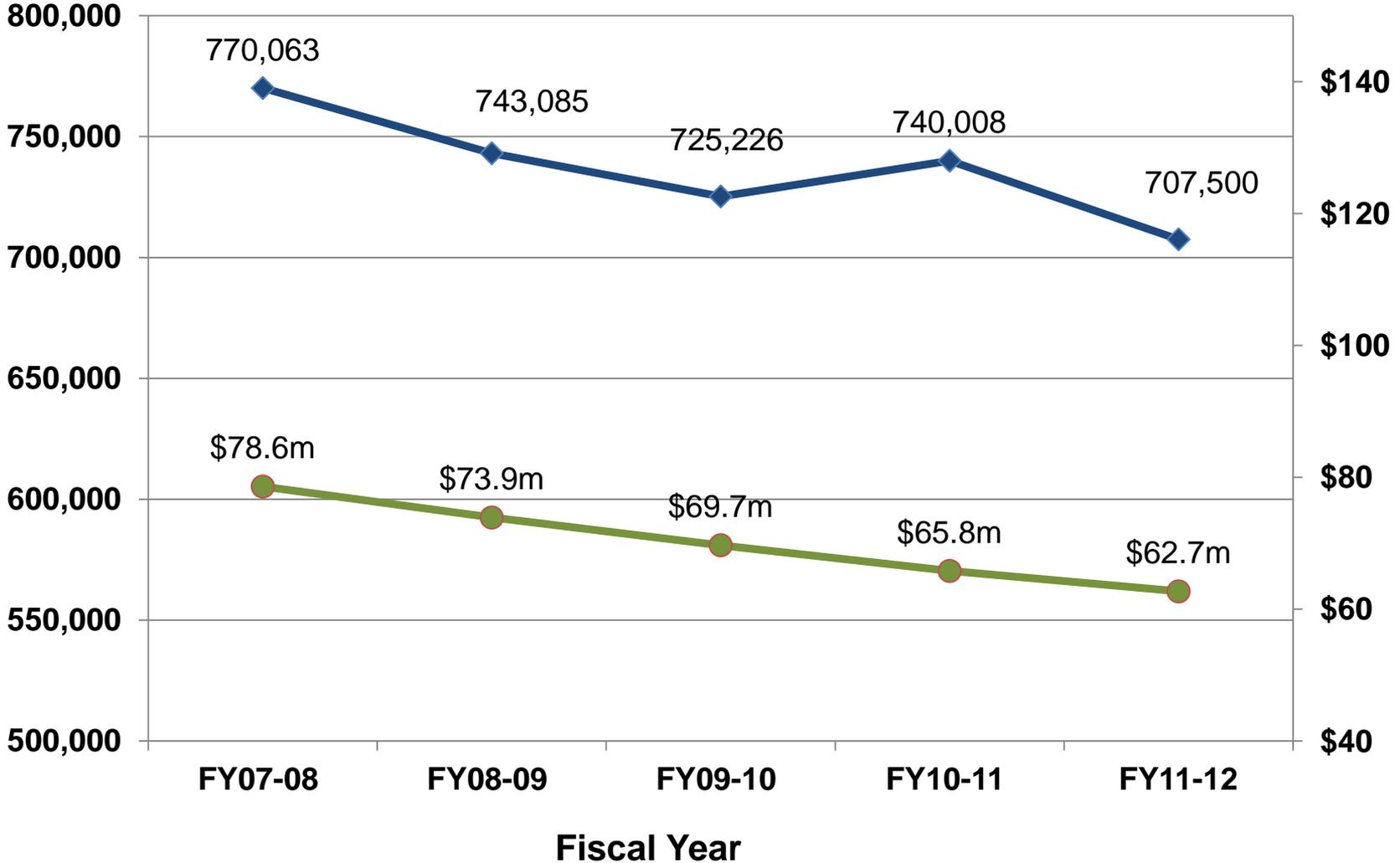
- ▶ 36 month term (January 2011 through December 2013)
- ▶ Average electricity rate of \$52.57/MWh
- ▶ Total contract value \$232.2m
- ▶ Declining letter of credit (initial value \$20m) to protect the City in the event of default by vendor
- ▶ 40% renewable energy at a cost of approximately \$450k per year (approximately 0.68% premium)  
*(additional information in the Appendix)*

# City Electricity Use



MWh Used

Cost in Millions



- ▶ City electricity expenditures in recent years have declined
  - Better electricity rates
  - Concerted effort of implementing energy conservation projects
    - Implementation of American Recovery and Reinvestment Act (ARRA) Energy Efficiency Conservation Block Grant of lighting retrofits and controls updates
    - Implementation of Dallas Water Utilities' Southside Wastewater Treatment Plant Energy Recovery Facility
  - Implementation of twice per week watering ordinance reduced use associated with pumping
- ▶ FY 10-11 usage was higher due to record heat – 71 days of 100 degrees or higher

# General Electricity Market Outlook

The City has an electricity procurement consultant and working with them we know:

- Current market prices for electricity are lower than our current contract prices (entered into in 2010)
- Professional energy analysts anticipate increases in electricity prices over the next several years both in the Texas and national markets
- The City cannot cancel its existing contract (expires December 2013) and cannot enter into more than one electricity contract at a time
- The City can benefit from today's lower market rates through an extension of its current contract

Staff has worked with TXU over the past several months on the concept of extending the current contract in order to take advantage of lower pricing available

*“May 22, 2012, AUSTIN, TX – A new long-term study released today confirmed that the Electric Reliability Council of Texas (ERCOT), grid operator for most of Texas, foresees potential electricity shortages within the coming decade as electric use in Texas continues to hit new records.”* **ERCOT News Release**

- ▶ Lower rates beginning January 2013
- ▶ Extend current agreement 29 months (January 2014 through May 2016)
- ▶ Maintain a letter of credit to protect the City in the event of default by vendor
- ▶ Maintain 40% renewable energy for calendar year 2013 (separate procurement proposed for 2014 and beyond)
- ▶ Provide \$1.5m grant to the City for high efficiency lighting retrofit

The proposal was reviewed by the City's electricity procurement consultant

*“prices will continue to rise in the future...”*



Consistent with ERCOT statement regarding demand potentially exceeding supply in the next decade

*“It was determined that TXU's proposed pricing was indicative of current forward market prices...”*



Consultant's analysis confirmed that prices provided by TXU are competitive with the market

*“the resulting energy savings from [the lighting retrofit]...will range from \$210k to \$250k per year...”*



Consistent with annual energy savings projected by TXU

- ▶ Renewable energy is an important part of the City's sustainability efforts
- ▶ Council made a policy decision in 2008 to purchase renewable energy for 40% of its electricity consumption
- ▶ 2009 cost for 40% renewable energy was approximately \$950k (1.4% premium)
- ▶ Current market suggests the City can purchase 100% for approximately \$985k (1.5% premium)
  - Renewable energy is purchased in the form of credits (see Appendix for more information)
- ▶ Renewable energy for 2014 and beyond would require a separate procurement in order to get the best pricing from a national market

# Projected Benefits from Proposal



Calendar Year					
	2013	2014	2015	2016	Total
Estimated Contract Savings	\$887,483	\$887,483	\$887,483	(through May) \$369,784	\$3,032,233
Cost of Renewable Energy	No increase	(\$984,455)	(\$984,455)	(\$410,190)	(\$2,379,100)
Lighting Retrofit	\$1,500,000	\$210,000	\$210,000	\$87,500	\$2,007,500
Total	\$2,387,483	\$113,028	\$113,028	\$47,094	\$2,660,633

\* Contract Savings estimates are based on existing contract  
Renewable Energy is 1.5% of total electricity cost

# Top Local Government Consumers of Renewable Energy



City of Dallas



Represents the largest green power users among local government partners within the Green Power Partnership – as of October 4, 2012

Recommendations would move Dallas to the top of this list

Local Government Entity	Annual Green Power Use (kWh)	Green Power % of Total Annual Electricity Use
1. District of Columbia	534,084,977	100%
2. City of Houston	438,000,000	35%
3. City of Austin	374,086,079	100%
<b>4. City of Dallas</b>	<b>295,883,744</b>	<b>40%</b>
5. Montgomery County Clean Energy Buyers Group	136,247,000	26%
6. City of Philadelphia	127,300,000	18%
7. Suffolk County, NY	123,000,000	90%
8. Chicago Public Schools	107,709,620	20%
9. DFW International Airport	87,000,000	30%
10. Port of Portland	75,030,000	106%

- ▶ Approve December 12, 2012 Council Addendum item to:
  - Authorize the City Manager to negotiate best and final prices with TXU and enter into an Electric Supply Agreement
    - 29 month extension
    - New contract term January 1, 2013 to May 31, 2016
    - Contract value not to exceed \$223.8m
- ▶ Proceed with separate renewable energy procurement for 2014 and beyond

- ▶ Finalize details of lighting retrofit project (which fixtures, which building(s), etc.) – December 2012
- ▶ Begin retrofit project December 2012 (assuming passage of December 12<sup>th</sup> Addendum item)
- ▶ Develop and issue Request for Proposals for renewable energy - Spring 2013

## Questions/Discussion

# Appendix

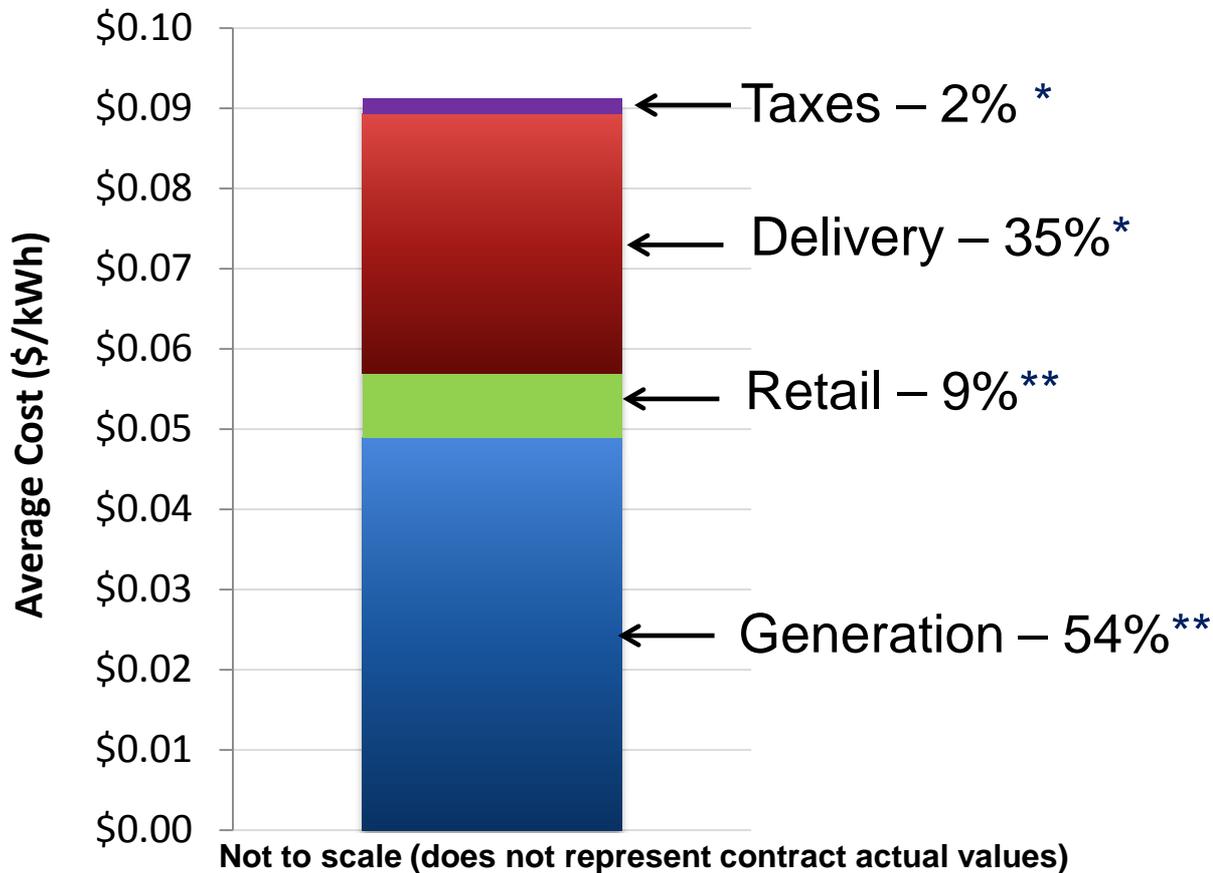
## »» Typical Electricity Cost Components

Renewable Energy Credits (RECs)

Consultant's Analysis

# Typical Electricity Cost Components

### Total Estimated Cost Components



\*Regulated (*Regulated by the Public Utility Commission*)

\*\*Deregulated

Renewable Energy Credits are tradable, non-tangible energy commodities that represent proof that electricity was generated from an eligible renewable energy resource

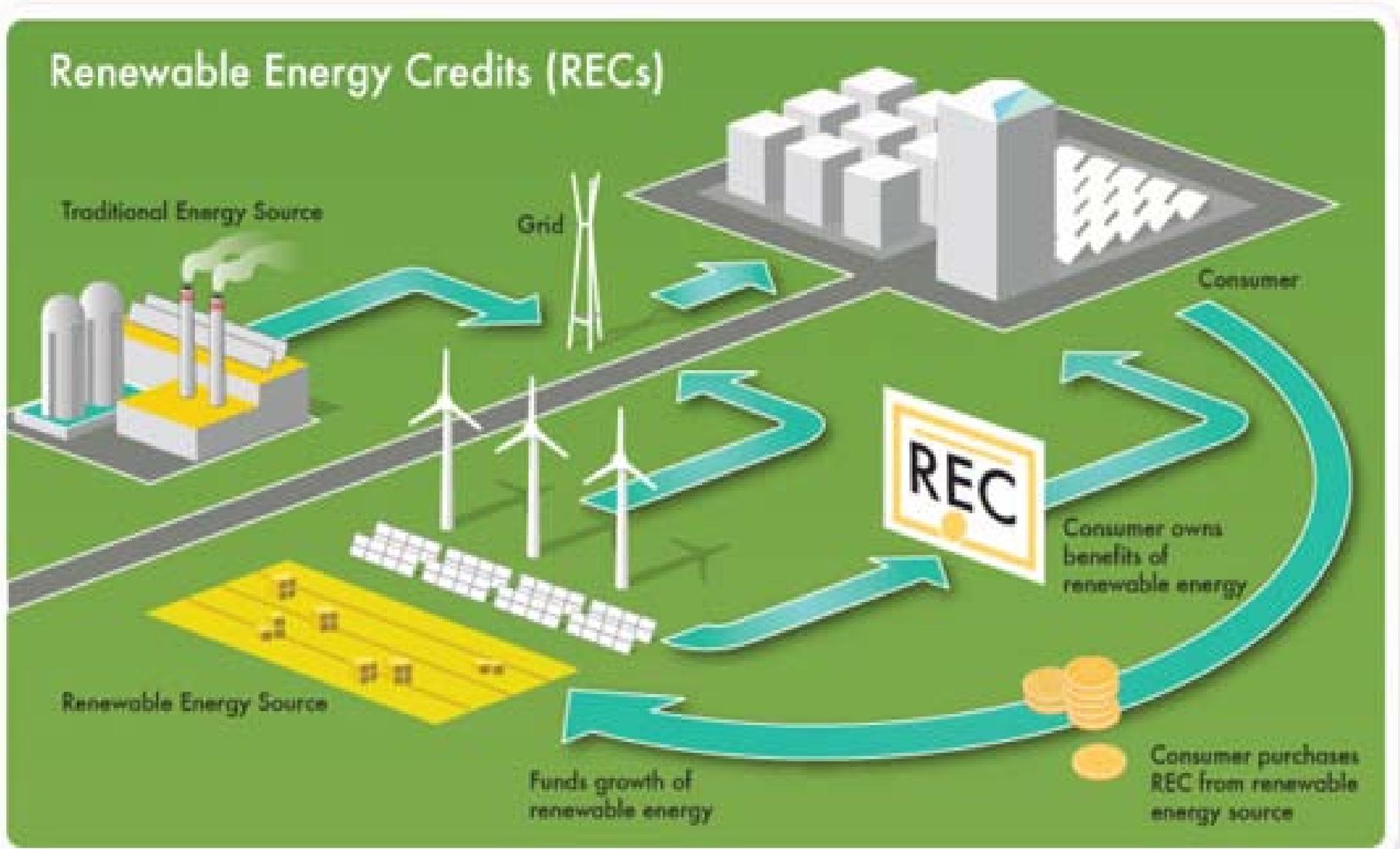
## Renewable Energy Sources Include:

- |   |   |
|---|---|
| <ul style="list-style-type: none"><li>• <b>Solar</b></li><li>• <b>Biomass</b></li><li>• <b>Wind</b></li></ul> | <ul style="list-style-type: none"><li>• <b>Water</b></li><li>• <b>Geothermal</b></li><li>• <b>Hydrogen and fuel cells</b></li></ul> |
|---|---|

# Renewable Energy Credits (RECs)

- ▶ Renewable energy generators (such as wind farms) produce electricity that reduces the need for fossil fuel-based generation (such as coal)
- ▶ For each MWh of electricity fed onto the electrical grid, the renewable energy generator can receive one renewable energy credit (REC)
- ▶ The REC identifies the physical electricity as renewable energy and can be sold separately (in addition to) the electricity by the generating facility on the open market

# Renewable Energy Credits (RECs)



Source: Air & Liquid Advisors

## Dallas benefits for buying RECs

- ▶ Supports U.S. Conference of Mayors Climate Protection Agreement (2006)
- ▶ Supports achieving the City's greenhouse gas emission reduction goals
- ▶ Receive points toward LEED building certification

**Date:** November 20, 2012

**To:** Mr. Errick Thompson, P.E., Department Director, EBS, City of Dallas

**From:** John. J. Bick, Managing Principal, Priority Power Management, LLC

**Subject:** Executive Summary Review of TXU Energy Proposal

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Priority Power Management, LLC ("PPM") has performed a technical analysis of the TXU Energy proposal to the City of Dallas ("COD") as presented 10/30/12 via e-mail. This memo provides an Executive Summary Review of the three main proposal elements: (1) Indicative forward rates, (2) Letter of Credit (LC), and (3) the Lighting Retrofit.

1. **Indicative Forward Rates.** PPM has evaluated TXU's proposed pricing as compared to forward curves from other sources. It was determined that TXU's proposed pricing was indicative of current forward market prices and was within a margin of error of +/-0.65%.
2. **Letter of Credit.** The LC protects COD from financial losses in the event that the contract is terminated by TXU resulting in COD facing purchasing replacement power at prices that are higher in the future. This is essentially an "insurance" policy. There is a cost associated with TXU posting an LC based on its value. There were three levels of LC amounts considered: \$20M (base case), \$26M and \$32M. The incremental cost for moving to a higher level LC from the \$20M base case is approximately \$440k per level. The cost of the LC is included in the electricity rate. These LC values protect against forward market movements higher of 15%, 20%, and 25% respectively.

PPM recommends a larger LC with a bi-annual declining schedule over the term. This new LC would take the place of the existing LC. The existing LC had an initial value of \$20M with a declining schedule for a 3-year contract term. A higher LC value is recommended for three reasons:

- a. The new contract term is longer (i.e. 41 months vs. 36 months);
- b. The price of forward energy is lower today than it was when the existing contract was executed; implying COD's exposure to higher forward market prices is more now than it was when the existing contract was executed.
- c. There is more risk today with TXU's financial stability during this new contract term than there was when the initial contract was executed.

PPM is finalizing the recommended value.

3. **Lighting Retrofit.** PPM has evaluated TXU's proposal to provide COD with \$1.5M to be used for retrofitting lighting fixtures in COD facilities with high energy-efficient fixtures. PPM estimates that the resulting energy savings from this TXU proposal element will range from \$210k to \$250k per year depending on the wattage and operating hours of the existing fixtures retrofitted.

Should you have any questions about this memo, please do not hesitate to contact me.



John J. Bick