Northeast Regional Conference

Commonwealth of Pennsylvania Energy Strategy

NASPO

National Association of State Procurement Officials

Agenda

1. Why did we need an energy plan?
2. Current strategic plan for energy
3. PJM Membership
4. Expectations

Appendices

Need for Change! Objectives!

- Business model for energy procurement had not changed in the previous 50 years!
- $$$$ on the table by not adapting to the "Leading Edge" technologies and procurement strategies.
  - $10M opportunity costs!
- As the Energy Market completes it's shift from demand driven to supply driven we must assure the continued viability of our supply base for Pennsylvania.

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Leadership

- Electricity, natural gas and all petroleum products have all increased in cost becoming a significant part of our Commonwealth Operating Budget.
- Needed to take leadership role in energy management as model for balance of State and Local Gov'ts!
- Needed to offer our leadership to local Gov'ts to help them manage their energy spend!

It was the right thing to do!!
We elected to move forward proactively with a number of leading edge programs!!

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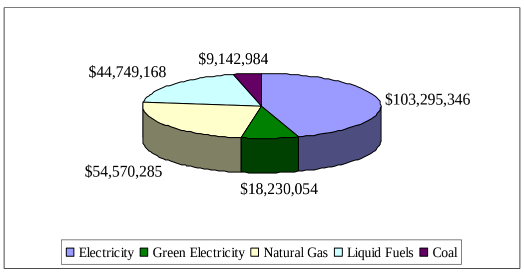
Annual Energy Spend

Commodity spend for fiscal year 2008



$230 Million in Spend!

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Proactively-This is what we are doing Today!

- Liquid Fuels
- Natural Gas
- Electricity
- New Energy ITQ Contract
- Renewable Energy
- Coal

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Liquid Fuels

- Previous Contract Structure
  - Bid differential price (margin, transport) by county
  - Commodity price floats on daily index
  - Two methods of delivery by county: truck transport for over 5000 gal., tank wagon for under 5000 gal.
- Disadvantages
  - Manages only small portion of our total unit cost (approx. 5%)
  - Full exposure to the daily volatility of the market
  - Provides little control over drastic increases in spend
    - FY 04-05: $19.5 million
    - FY 05-06: $25.9 million
    - FY 06-07: $38.0 million
    - FY 07-08: $44.7 million
  - Daily price changes cause frequent invoice payment problems

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Tank Wagon Issues

- Many small tanks (<500 gal.) located in remote areas.
  - Suppliers overbooking causes problems with on-time deliveries
  - Limits supplier base, discourages new entrants
- Invoice Payment problems
  - GR entry problems
  - Supplier confusion
  - Vast majority of invoices less than $5000
- Those who received deliveries closer to 5000 gal. and/or pay bills on time subsidize those who don't

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Revised Tank Wagon Strategy

- ITQ Contract for deliveries less than 5000 gal.
  - Tank Wagon is contract of convenience
  - Qualify suppliers by county
    - Agencies follow procurement procedures based on dollar amount.
    - Agencies obtain quotes from qualified suppliers form the ITQ in county, select best price, cut PO
  - Invoicing
    - Quoted prices firm, easier to match GR with IR, less potential for errors.
    - Mandated utility P- card use for orders under $5000 should remove bulk of payment issues.

Truck Transport Issues -5000 gallon Plus

- Current contract structure provides no control over commodity costs.
- No coordination within or between agencies in terms of delivery scheduling
- Significant purchasing power not utilized.
- Blanket PO's used almost exclusively, little visibility of inventory on hand or frequency of deliveries

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Truck Transport Strategy

- Work through suppliers to hedge fuel purchases for large users through NYMEX.
  - Approx. 40% of customers use this strategy
  - Bid differential price, then make commodity buys when price is advantageous
    - Can make buys for front month or several future months
    - Target buy is 50% of volume for largest volume truck transport users
    - Buys must be made in 42,000 gal. increments, can be dispersed to users throughout a supplier's scope of awards.

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Truck Transport Strategy (Cont.)

- Advantages of fuel hedging strategy
  - Gain control of total commodity cost
    - Reduce market exposure
    - Smooth out spikes in pricing
  - Can use this strategy to buy incremental components of usage, reduces risk
    - "Diversified Portfolio" of fuel purchase quantities and prices
  - Flexibility to purchase one or multiple months of usage when market prices reach low point
  - BOP processing PO's centrally, will provide higher quality usage data, visibility of delivery frequency

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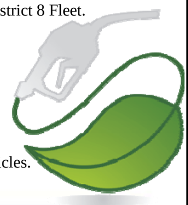
Biofuels

- **Biodiesel and Bioheat**
  - B5 remain on std Truck Transport contract and any future variations.
  - Will also be available via Tank Wagon ITQ.
  - Currently Biodiesel is trading at $4.96 gal; straight diesel $3.334 gallon.
  - Current economics do not favor Biodiesel !
  - Current State Legislation H.B 1202 requires the increasing use of Biodiesel based on State Production estimates.
    - This rises from 2% to 20%.
  - PENNDOT is currently piloting Biodiesel in their District 8 Fleet.
- **Ethanol**
  - Will remain on unleaded truck transport gas contract and tank wagon ITQ as required E10. blend in Philadelphia.
  - E10 is becoming standard in other areas of the state.
  - E85 has availability problems, requires flex-fuel vehicles.



Natural Gas

- Current Strategy
  - Contract on index rate (margin, transport, & fees)
  - Commodity price set by NYMEX
  - Can lock in all, or portion of future commodity at current NYMEX prices at any time
- This strategy has been successful.
  - May 2008 gas auctions – over $320,000 in avoided costs
  - Winter 07-08 Price Lock-in – over $400,000 saved vs. index rate
- Gas bid results May 19th, 2009
  - MCF Bid 1,440,194
  - Accounts 33
  - Savings from LDC current Tariff $5.7M
  - Savings from 2007/2008 avg. cost for these accounts $1.4M

Natural Gas (Cont.)

- Prices rose above Katrina era highs in July, then retreated to favorable levels.
  - Commodity price locked-in for 100% of October 2008 to April 2009 volumes.
    - Mitigates risk of typical price increases in winter and any increases due to weather related supply interruptions.
- Investigating potential to buy gas volume in spring/summer at lower prices and store for use in winter months.

Coal

- Coal price increase from 2007 - 2008
  - Anthracite: +15% to $159 per ton
  - Bituminous: +98% to $188 per ton
- Coal price reduction for 2008 – 2009 vs. 2009 – 2010
  - Anthracite: -19.05% per ton
  - Bituminous: -45.51% per ton
- Coal is still half the cost of natural gas or less based on heating value.
- Meet frequently with State staff and suppliers as a working group to map strategies for expanded use of coal.
- Due to emissions requirements and DEP licensing more locations are choosing alternative energy sources when upgrading their facilities.

Electricity

- Rate caps begin to expire at end of 2009 (PPL).
  - Contracts currently in place where caps have already expired.
  - Expected increase 40% to 50%.
- Can achieve savings vs. utility rates using current bidding method.
  - Historically have seen 5% - 10% reduction vs. utility LDC (Local Dist. Co.) rates by bidding Generation Service separately for larger accts. and aggregating small accts. for base load bid.
- Chose the option of purchasing wholesale power directly from PJM grid when caps expire.

Electricity (Cont.)

- Commodity cost savings vs. uncapped rates
  - 3rd party supplier contracts (current strategy)
    - Firm fixed price: 5% to 10% vs. utility
    - Block & Index: 5% to 10% vs. utility
    - Index price: 10% to 15% vs. utility
  - Wholesale procurement (PJM)
    - Wholesale ourselves: 20% vs. utility
    - Wholesale through Agent: 17% to 20% vs. utility

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PJM Membership

- PJM Membership Advantages
  - Buying wholesale cuts “middle man” in competitive bidding out of the equation.
  - Allows us to develop and execute a long-term procurement strategy, mitigating market risk.
    - Buy incremental blocks of power of varying term lengths to cover our base load.
    - Remainder of usage can be purchased in real-time or day-ahead markets based on pricing expectations.
  - Allows us to purchase power directly from generators and sell any power we produce ourselves.

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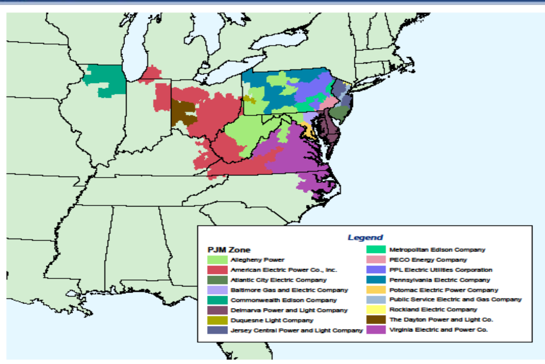
PJM Footprint



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Do-It-Yourself vs. Agent

- Managing PJM wholesale purchases ourselves
  - PJM requires all market participants to be trained to a certain level of expertise.
  - Potentially required to maintain 24/7 operations center.
  - Lack of PJM market experience, expertise, and staff.
  - Would need to look to outside for necessary software at a significant cost.

Do-It-Yourself vs. Agent (Cont.)

- Buying wholesale through agent
  - Would function as back office on our behalf, using our PJM membership and licenses.
    - Would collect and analyze data, forecast load and prices.
    - Would process all transactions on our behalf.
  - We would select this agent through RFP process, shift as much risk to them as possible.
  - Cost is $0.002 to $0.007 per kWh depending on requested services.

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Electricity Project

4/2009

COPA DGS has selected an Electric Service Supplier to bid the base load in the PPL and PECO territories Dec. 2009

10/2009

PPL does the first auction to determine their pricing and our price to beat.

11/2009

CWOPA sets up the first auction for the base load and begins the day ahead bidding for non-base requirements.

January thru June 2010

CWOPA has implemented a hybrid system using a combination of Local Distribution Company, auctioned base loads and day ahead pricing.

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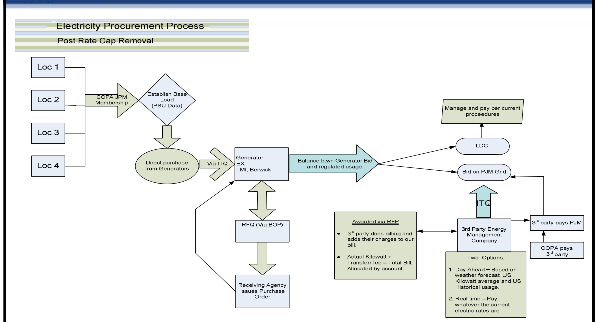
Post Rate Cap Removal Options



NOTES:
1. PP&L Rate Caps expire on 01/2010, PP&L accounts for about 50% of COPA consumption.
2. All others expire on 01/2011
3. BOP Manages Procurement directly with generators & Third-party energy providers or bidders on grid.

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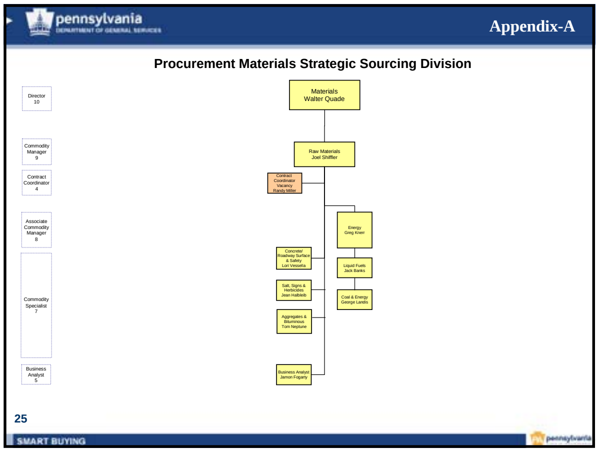
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Appendix-A
Procurement Materials Strategic Sourcing Division
Director
10
Commodity Manager
9
Contract Coordinator
4
Associate Commodity Manager
8
Commodity Specialist
7
Business Analyst
5
Materials
Walter Quade
Raw Materials
Joel Shiffler
Contract Coordinator Vacancy Randy Miller
Energy
Greg Knerr
Concrete/ Roadway Surface & Safety
Lori Vessella
Liquid Fuels
Jack Banks
Salt, Signs & Herbicides
Jean Halbleib
Coal & Energy
George Landis
Aggregates & Bituminous
Tom Neptune
Business Analyst
Jamon Fogarty
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NYS OFFICE OF GENERAL SERVICES - PROCUREMENT SERVICES GROUP

ENERGY PROCUREMENT PROGRAM

ENERGY TEAM LEADER
ED LUCIER

PURCHASING OFFICERS
COLLEEN MESSIER
RUSS PATTON
RUTH QUEZADA

SUPPORT STAFF
MARY DELAMATER
TARA PAPINEAU

COMMODITIES

ENERGY

Group	Commodity
05500	Heating Fuel
05600	Gasoline and E85
05602	Diesel Fuel/ Bio Diesel
05800	Propane
05900	Natural Gas
05301	Renewable Energy Credits

ENERGY CONTRACTING

(ALL Filed Requirement Contracts)

TYPES OF CONTRACTS

Weekly Indexed
Heating Oil (JOC)
Gasoline and E85 (OPIS)
Diesel and Bio Diesel (JOC)

Monthly Indexed
Propane (JOC)

Fixed F/ Index F/ Index I
Natural Gas (NYMEX)
- New Option
  - Firm Transportation
  - Interruptible Transportation

Renewable Energy Credits

ANNUALIZED CONTRACT VALUES

HEATING OIL	$167,000,000
GASOLINE and E85	$92,000,000
DIESEL and Bio Diesel	$108,000,000
PROPANE	$4,000,000
NATURAL GAS	$61,500,000
RENEWABLE ENERGY CREDITS	$665,000
TOTAL VALUE	**$433,165,000**

NEW INITIATIVES

- Pilot Wind Power Project (1.5 kW)
- Solar Energy Equipment Contracts (Pending)
  - Solar Energy Systems (Photovoltaic)
  - Solar Lighting
  - Wind Systems
  - Fuel Cells
  - Installation

OGS PSG CONTACTS

- Customer Services (518) 474-6717
- Team 3 Energy (518) 473-6811