Managing Utility Price Risk

and

Preserving Capital Budgets in Today's Volatile Energy Market

Presented By:

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May 2, 2006

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Agenda

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1 **Volatility in Today's Utility Market**

- **Natural Gas & Electricity**
- **Transitioning Away From Rate Caps Within Semi-Deregulated Energy Markets**
- **PA PUC's Implementation of an Electric Market Portfolio Standard**
- **Energy Rate Escalations / Locking in Today's Rate**

2 **Minimizing Risk Exposure via Conservation**

- **Typical Approaches to Implementing Utility Conservation Measures**
- **Pros / Cons of Each Approach**

3 **Questions and Answers**

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Volatility in Today's Utility Market

Natural Gas

Fully Deregulated, Mature Market

Many suppliers can provide natural gas commodity to meet your facilities needs.

Large Commercial Accounts: Daily reconciliation
General Commercial Accounts: Monthly reconciliation

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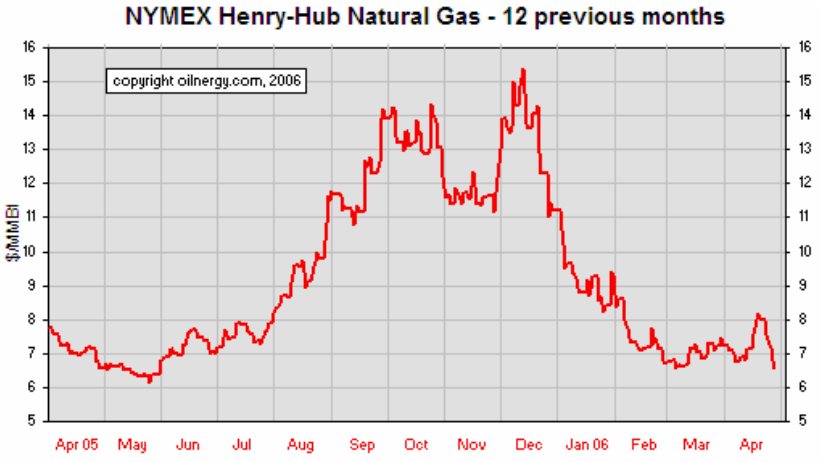
Volatile Energy Markets Cause Headaches



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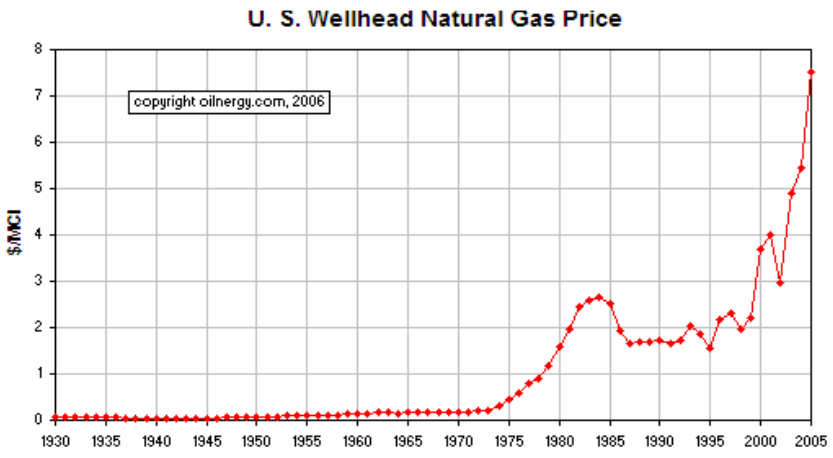
What Happened To Predictability?



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Variability In Weather Conditions

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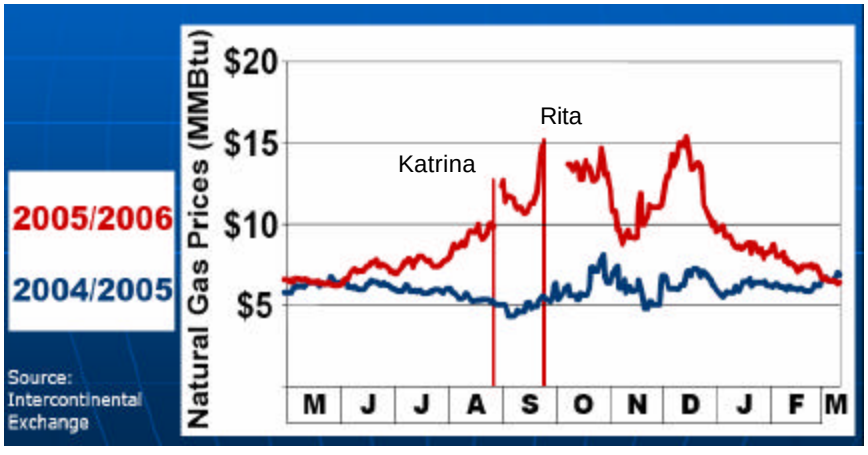

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Variability In Substitute Fuel Costs

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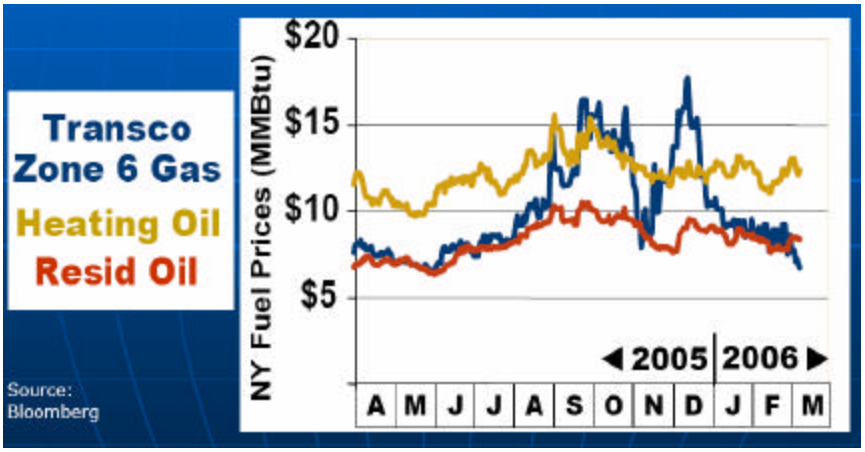

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Variability In External Conditions

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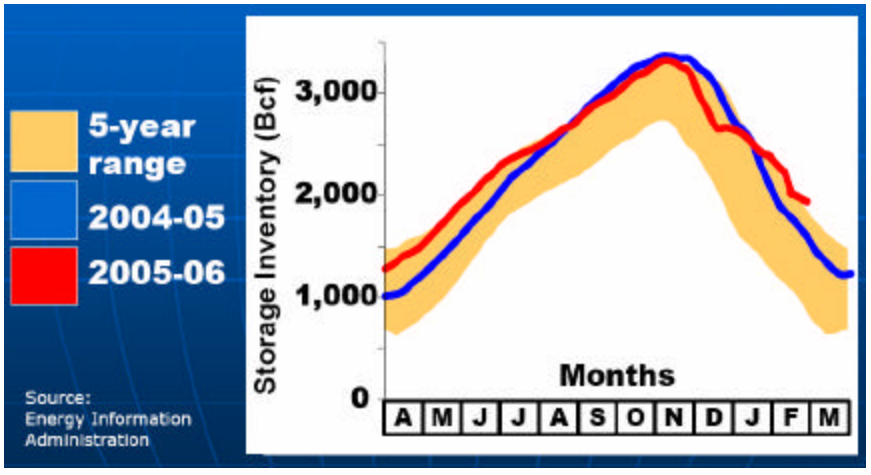

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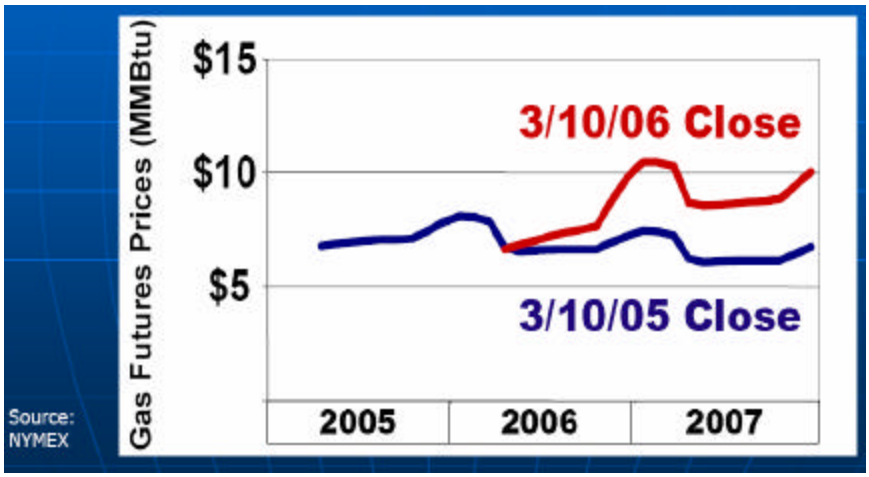
Variability In Market Expectations

http://www.ferc.gov/legal/staff-reports/eng-mkt-update.pdf



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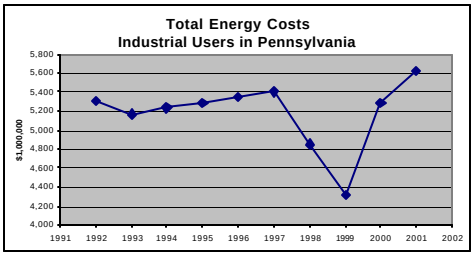
Volatility in Today's Utility Market

Electricity

Semi – Deregulated
Rate Caps in Place



1998: Deregulation initiated by PA Legislature & PUC
2000: Wholesale prices exceed Price – to – Compare
2002: Practically no retail shopping of accounts
2004: Alternative Energy Portfolio Standard
Electric Utilities begin phase out of rate caps
2012: Full Deregulation of all Electric Utility Companies

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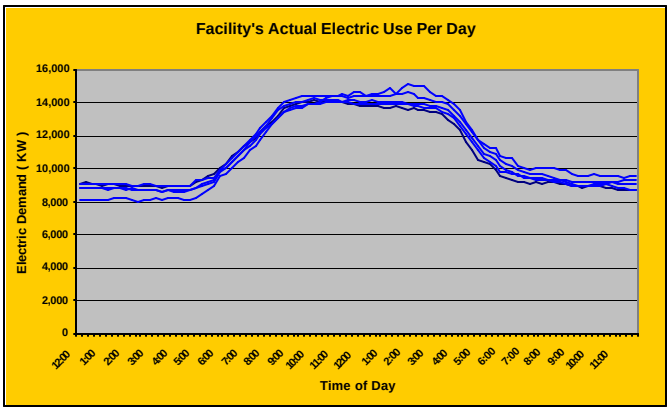
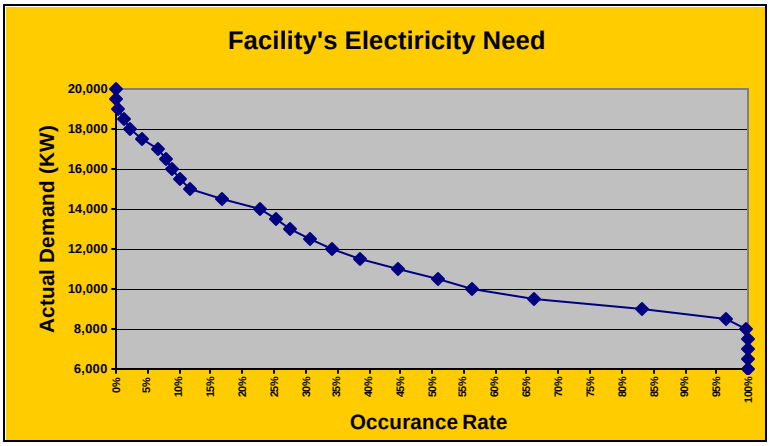
Variability In Usage Patterns

Your Buildings Are Dynamic



Peak Energy Needs Can Be Costly



Variability & Complexity In Rates

MONTHLY RATE TABLE.

FIXED DISTRIBUTION SERVICE CHARGE: $291.43

METERING AND BILLING CREDITS. A customer receiving Advanced Meter Services from a AMSP other than the Company will receive a credit on the Fixed Distribution Service Charge equal to the Total Metering Credit set forth for this Base Rate in Appendix B to the Joint Petition for Full Settlement. A customer receiving Consolidated EGS Billing will receive a credit on the Fixed Distribution Service Charge equal to the Billing and Collection Credit set forth for this Base Rate in Appendix B to the Joint Petition for Full Settlement.

VARIABLE DISTRIBUTION SERVICE CHARGE:

$1.60 per kW of billing demand

0.65¢ per kWh of the first 150 hours' use of billing demand

0.51¢ per kWh of the next 150 hours' use of billing demand,

but not more than 7,500,000 kWh

0.17¢ per kWh for additional use.

COMPETITIVE TRANSITION CHARGE:

$4.42 per kW of billing demand

2.45¢ per kWh for the first 150 hours' use of billing demand

1.48¢ per kWh for the next 150 hours' use of billing demand,

but not more than 7,500,000 kWh

0.52¢ per kWh for additional use.

ENERGY AND CAPACITY CHARGE: The following Energy and Capacity Charges will apply to the customer if the custom

receives Default PLR Service. These charges are not applicable to the customer if it obtains Competitive Energy Supply

$6.07 per kW of billing demand

4.65¢ per kWh for the first 150 hours' use of billing demand

3.32¢ per kWh for the next 150 hours' use of billing demand

but not more than 7,500,000 kWh

2.02¢ per kWh for additional use.

TRANSMISSION SERVICE FOR CUSTOMERS RECEIVING DEFAULT PLR SERVICE: Unless such a customer is able to obtain transmission service on its own, PECO Energy will provide transmission service, and will impose charges on such a customer for such transmission service.

TIME-OF-USE ADJUSTMENT:

Customers with measured demand of 2,000 kW or greater will be given a credit for energy use during off-peak hours and will be subject to an additional charge for energy use during on-peak hours. On-peak hours are defined as the hours between 8:00 am

Direct kW charge
$12.09 per kW

Indirect kW charge
But, the billing demand (kW) affects the size of each kwh block in the tiered rate structure.

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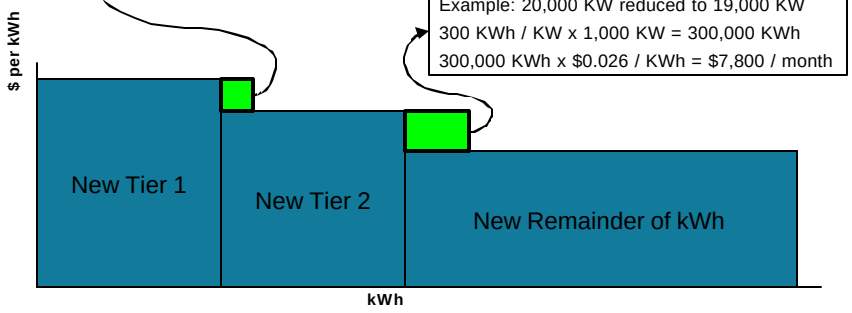
Example: 20,000 KW reduced to 19,000 KW
150 KWh / KW x 1,000 KW = 150,000 KWh
150,000 KWh x $0.026 / KWh = $3,900 / month

$12,090 + $11,700
Savings Per Month

Example: 20,000 KW reduced to 19,000 KW
300 KWh / KW x 1,000 KW = 300,000 KWh
300,000 KWh x $0.026 / KWh = $7,800 / month



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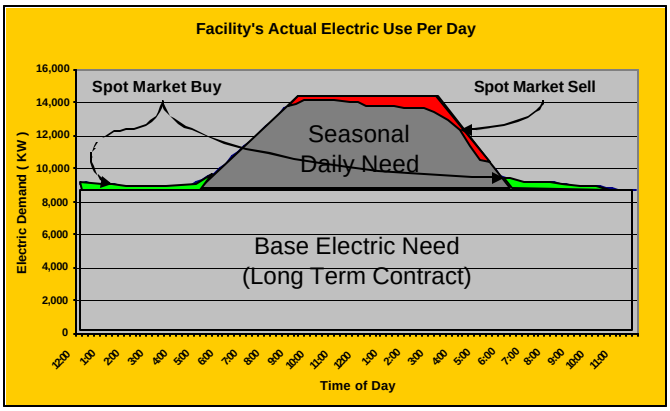
Electric Supplier's Manage Costs



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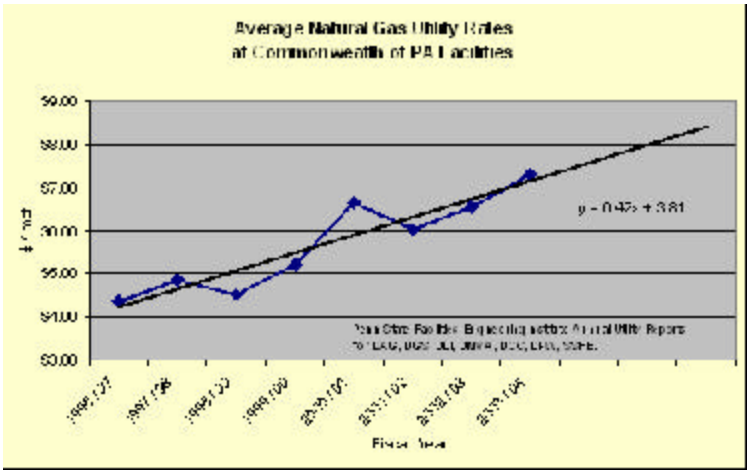
Variability In Market Prices



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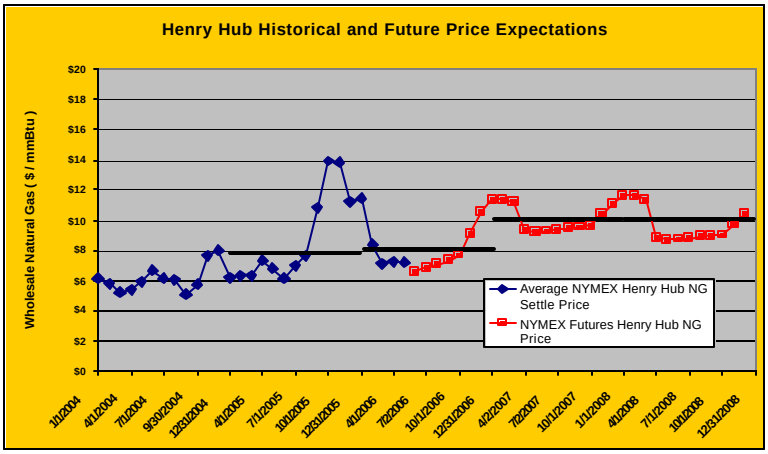

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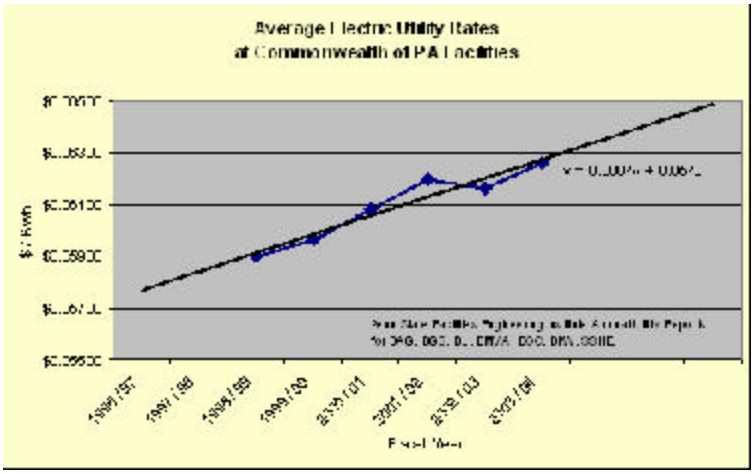

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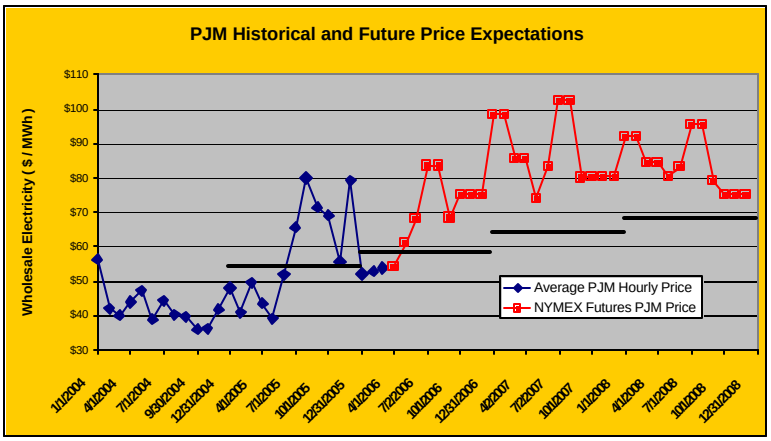
Variability In Market Prices



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Variability In Market Prices – All Energy

	Units	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005
Unit Fuel Costs						
Anthracite Coal	$ / ton	$ 58.66	$ 58.96	$ 70.37	$ 78.41	$ 92.89
Bituminous Coal	$ / ton	$ 41.96	$ 47.09	$ 47.10	$ 46.23	$ 85.95
Gas (1)	$ / mcf	$ 7.47	$ 6.10	$ 5.82	$ 6.56	$ 7.44
Oil (1)	$ / gal	$ 1.02	$ 1.08	$ 0.88	$ 0.95	$ 1.55
Electric (2)	cts / kwh	6.11 ¢	5.87 ¢	5.81 ¢	5.97 ¢	6.02 ¢
Unit Energy Costs						
Anthracite Coal	$ / mmBtu	$ 2.32	$ 2.33	$ 2.79	$ 3.10	$ 3.68
Bituminous Coal	$ / mmBtu	$ 1.58	$ 1.77	$ 1.77	$ 1.74	$ 3.23
Gas (1)	$ / mmBtu	$ 6.30	$ 5.96	$ 5.69	$ 6.41	$ 7.29
Oil (1)	$ / mmBtu	$ 7.30	$ 7.70	$ 6.27	$ 6.80	$ 11.09
Electric (2)	$ / mmBtu	$ 15.88	$ 15.26	$ 15.18	$ 15.61	$ 17.65
Weighted Average	**$ / mmBtu**	**$ 8.26**	**$ 8.09**	**$ 7.89**	**$ 8.45**	**$ 9.37**

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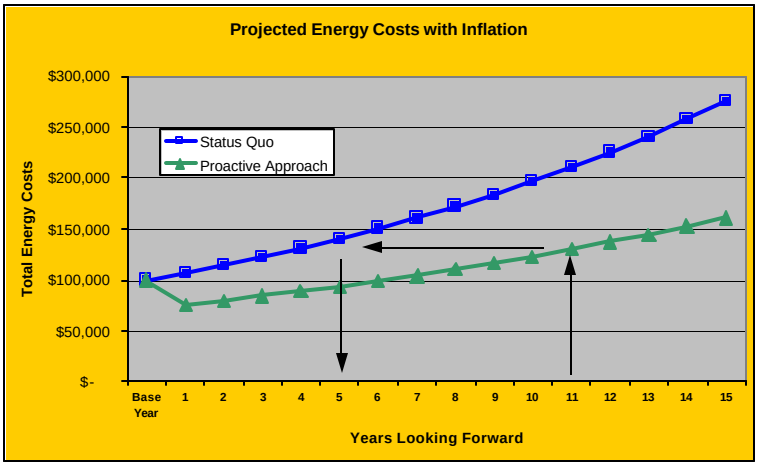
Return To Energy Costs of Six Years Ago

How do you make it happen?



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So where does this leave us?

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The Ugly Truth – This is Where We Are

- Infrastructure is aging
- Growth is challenging capacity
- Funding is decreasing
- Expectations are increasing
- Systems are more complex

Are we doomed to fail?

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Does this happen in your budget meetings?

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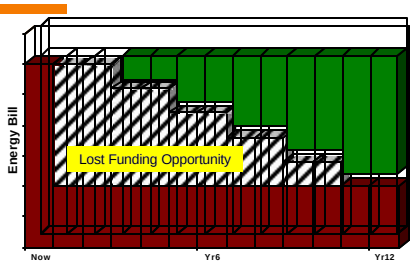
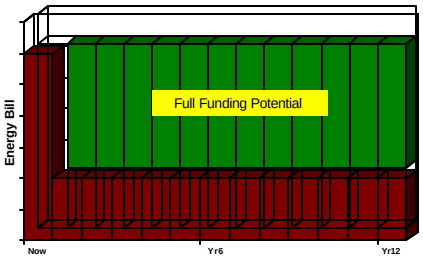
Financial Impact of Implementation



Financial impact of implementing ECMs over time

Wouldn't this scenario be better?



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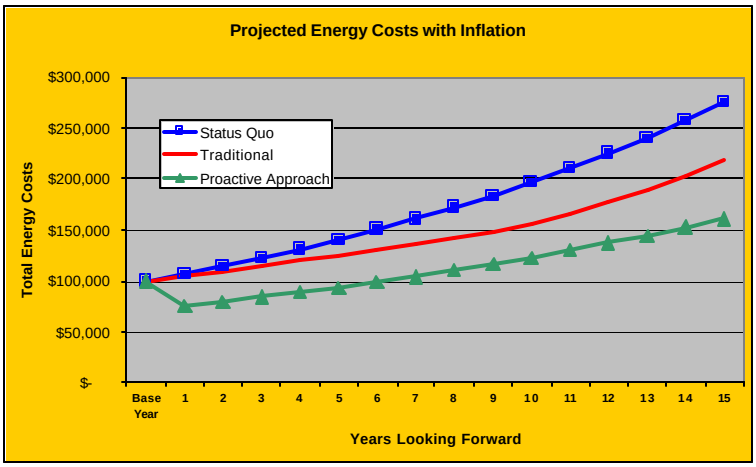
Financial Impact of Implementation



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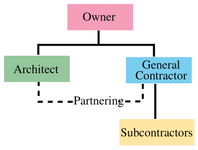
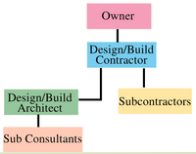
Typical Construction Delivery Methods

Traditional Design-Bid-Build



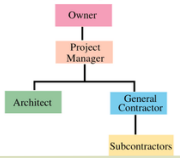
- Lowest initial **price**
- Potential for change orders and claims very high
- No contractor involvement in design phase
- Final price unknown

Design / Build



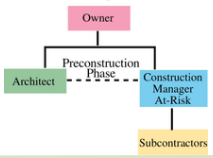
- Selection based on best qualified proposed design
- Single point of responsibility
- Eliminates "finger pointing" between GC and A/E
- Time and growth **costs** minimized
- Shorter design/ construction phase

Project Management



- Staff extension of owner
- PM can be involved in operations, design, construction and maintenance
- PM has no liability for **cost** and schedule control
- PM has no control over trade contractors

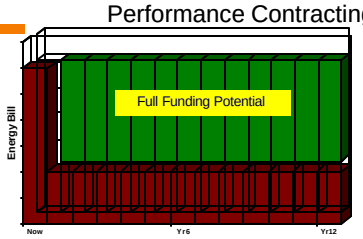
Construction Management At-Risk

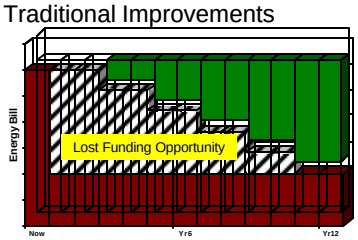


- Selection based on reputation, quality of work and past performance
- CM works with architect to evaluate materials, building systems, costs and schedules during design
- CM reviews drawings early in process to minimize conflicts and change orders during construction
- CM provides a bonded, guaranteed price for work
- Lowest long-term **cost**

Performance Contracting Benefits

Performance Contracting vs. Traditional Improvements





Today's Construction Prices	**Future Construction Prices**
Reduced Deferred Maint.	**Increased Deferred Maint.**
Best Value Contracting	**Low Bid Contracting**
Self-funding Project, Guaranteed	**Funding Must Be Obtained**
Consistent Approach	**Piecemeal**

Where does Performance Contracting fit?

versus

Performance

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What is Performance Contracting (PC)?

A procurement method used to obtain facility improvements without the requirement of up-front capital.

Project *(maximum of 15 years)* is funded through **GUARANTEED** energy savings.

Guaranteed Energy Savings Act: Act 77 of 2004

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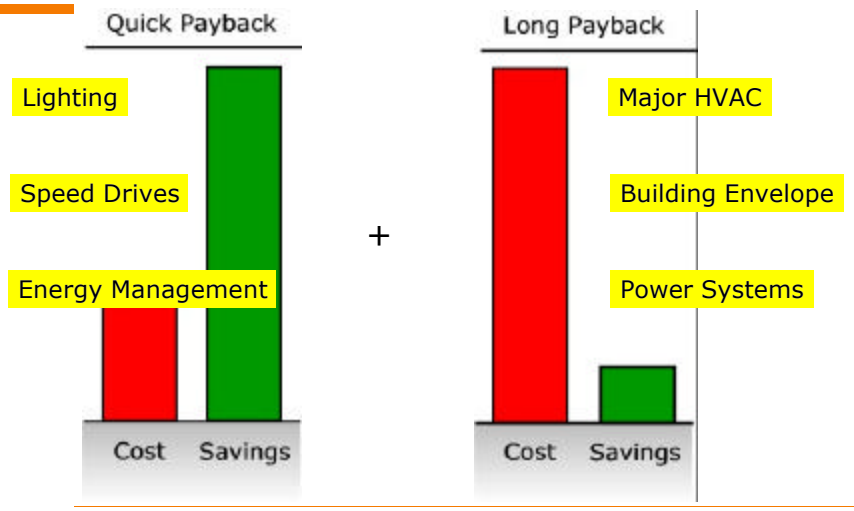
PC: What?
Energy Related Improvements



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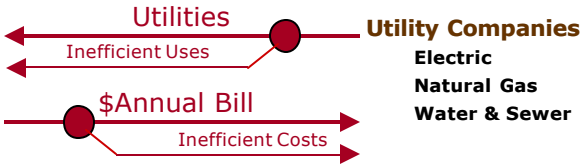
PC: What?
Project Implementation



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PC: What?
Project Implementation

Utilities

Utility Companies
Electric
Natural Gas
Water & Sewer

$Annual Bill

Inefficient Costs are SAVED!

Improvements, plus
Integrated Design
Const & Project Mgmt
Training
Warranty

Third-party funding
- **Secured against Improvements & Savings**
- **Paid on Schedule of Values**

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Up-Front Cost

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PC: What?
Project Implementation

Utilities

Utility Companies
Electric
Natural Gas
Water & Sewer

$Annual Bill

Payment

Improvements, plus
Integrated Design
Const & Project Mgmt
Training
Warranty

Guarantee

Guarantee > Payment

ESCO

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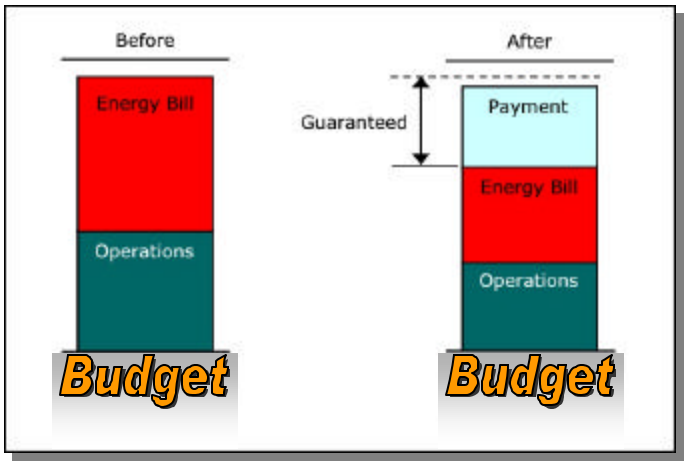
PC Overview



There is hope!

- Leverage inefficiencies
  (create money out of your problems)
- Long-term performance guaranteed
- Long-term savings guaranteed
- Single-point of accountability for project performance
- Funded with O&M savings
- Guaranteed energy savings projects are being implemented throughout facilities in Pennsylvania

Conclusion

Single Most Important Factor in the Success of a Project is Selecting the Right Partner!

Selecting The Right Partner

- Independent and objective
- Solution focused
- Comprehensive long-term approach
- Organizational depth/expertise
- Financially stable: require bonding reference
- Professional disciplines on staff
- Similar experience
- Can you maintain a relationship over time
- Commitment to Pennsylvania

References validate selection criteria.

Questions?