

Understanding Your Energy Costs: The Power to Take Control Kentucky's K-12 Success Story

High Performance Public Buildings Workshop

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KENTUCKY COMMUNITY TECHNICAL COLLEGE SYSTEM OFFICE

Versailles, Kentucky

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Kentucky School Boards Association-School Energy Managers Project



Statutory & Policy Drivers

- HB2 (2008) to KRS160.325 to Board Policy 05.23
 - Develop/ Implement/Monitor Energy Management Plan
 - Track & Monitor Progress Managing & Reducing Costs
 - District/Superintendent Annual Reporting
 - KSBA collects, verifies and reports to DEDI & LRC

Second Important Energy Statute for Schools

KRS157.455 – Highly Efficient Buildings

- Create Healthy Environment while Saving Energy
- Use Life-Cycle Analysis in Proposal Evaluation
- Consider Net-Zero Construction

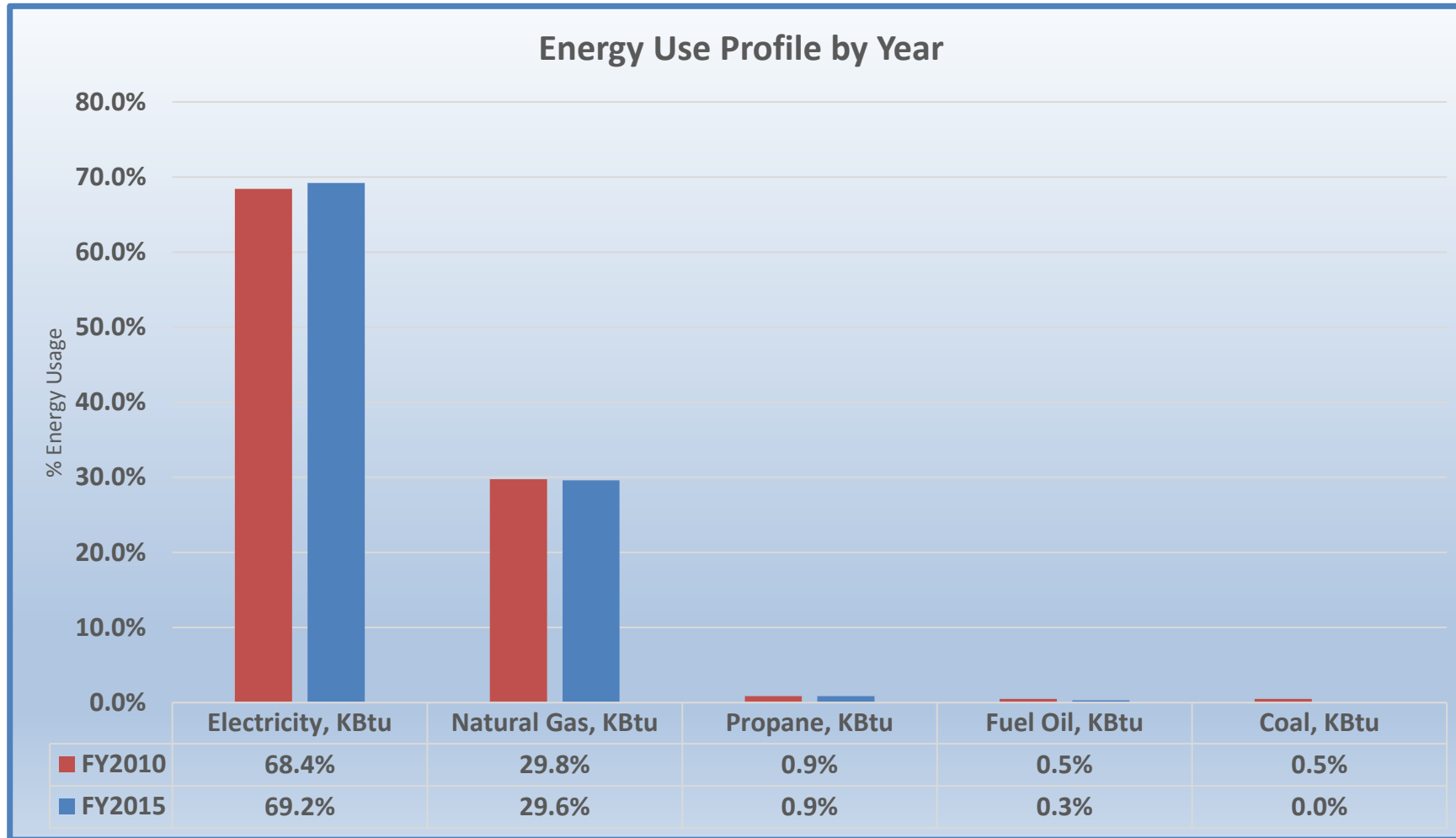
What have schools done

- Employed Energy Managers
- Facility & Operation Audits
- Staff/Student Involvement
- Implemented Efficiency Measures
 - Adjusted HVAC temperature set points
 - Incorporated HVAC temperature set backs
 - Lighting Retrofits
 - Performance Contracts
 - ENERNOC Programs

Energy Manager

- Dedicated Resource
 - No priority shuffling
 - Significant ROI (This NON classroom position saves multiple classroom positions)
 - Knowledgeable connection to utility companies
- Skilled Resource
 - Evaluates and presents energy saving options
 - Facilitates policy compliance
 - Translates technical information

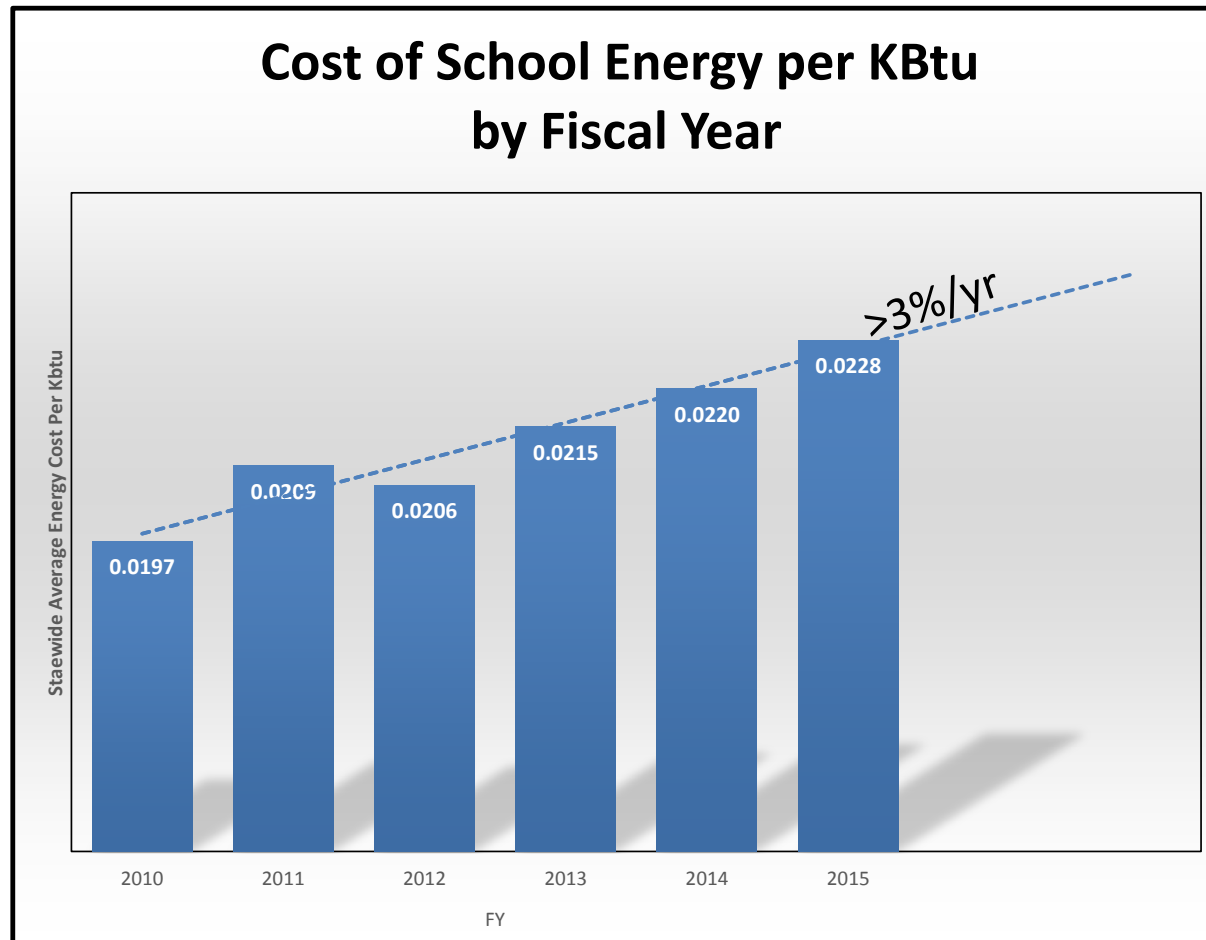
School Fuels



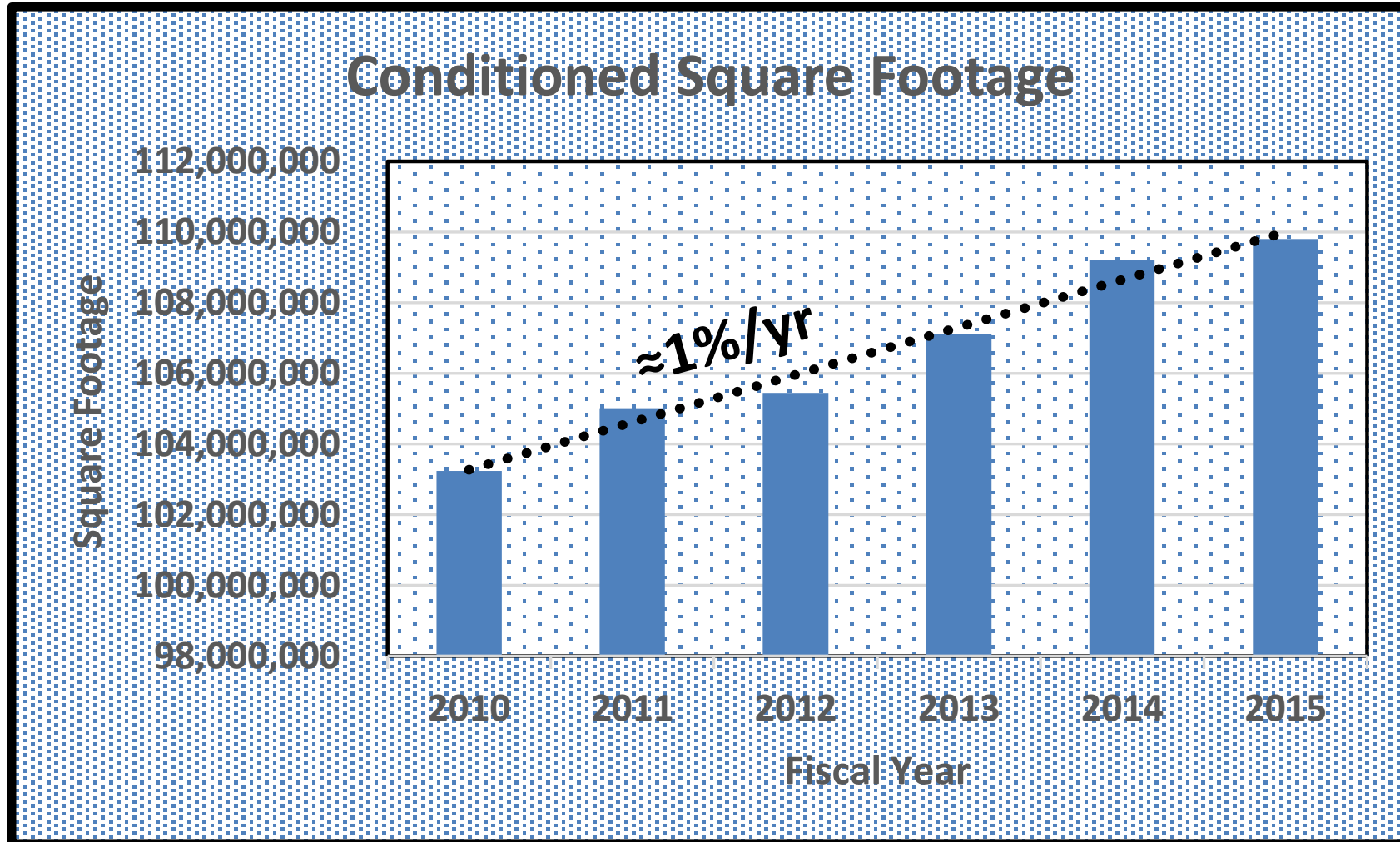
Average K-12 Electric Price by Supplier

Provider	Rate
Kentucky Utilities	\$0.093
Duke	\$0.095
Eastern Kentucky COOP	\$0.099
Louisville Gas & Electric	\$0.108
Kentucky Power	\$0.112
TVA COOP	\$0.114
Princeton Municipal	\$0.161

Cost per Unit of Energy in Kentucky's K-12 Schools



Square Footage Increase



Energy Utilization Index Change in Performance Since FY2010

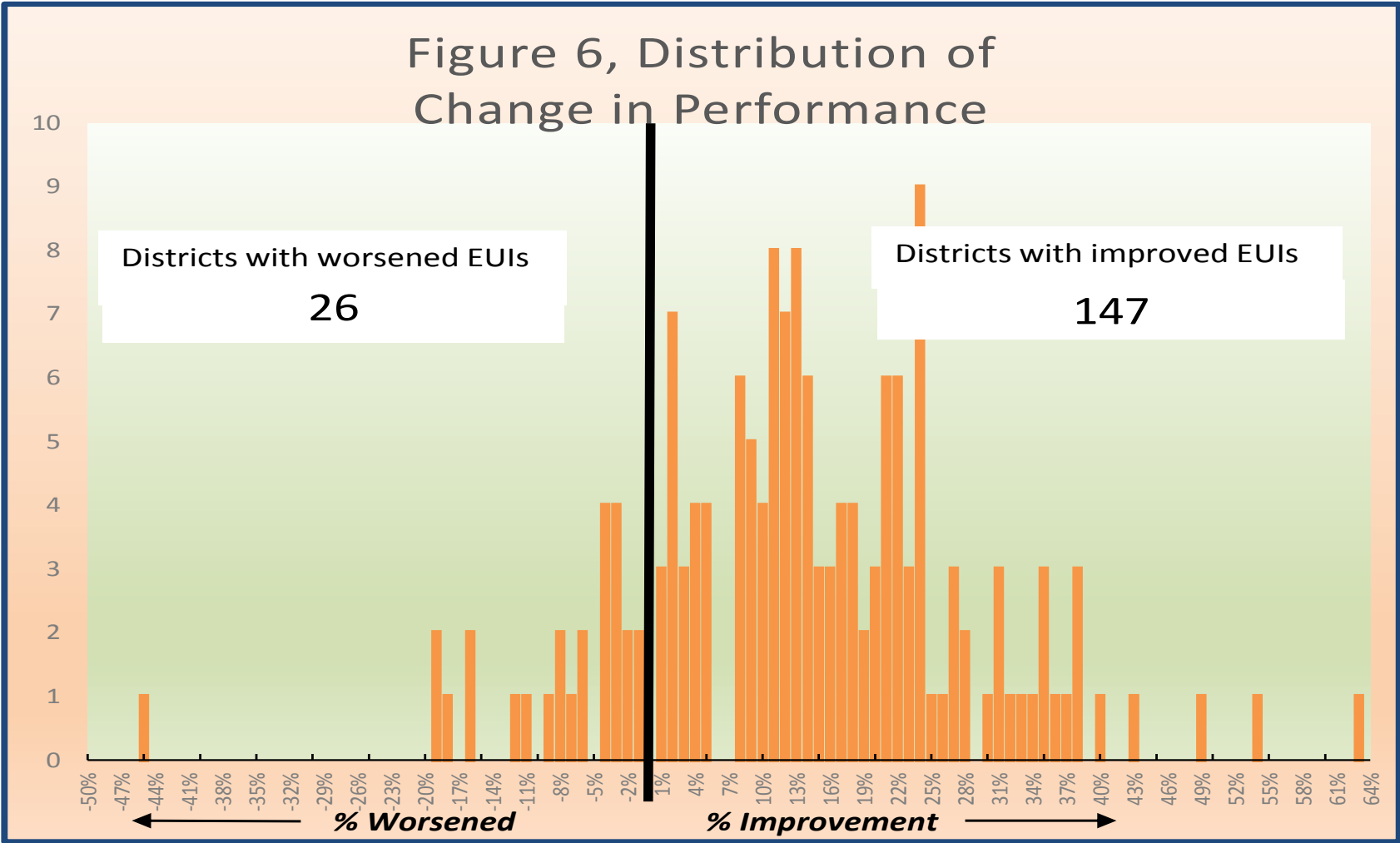
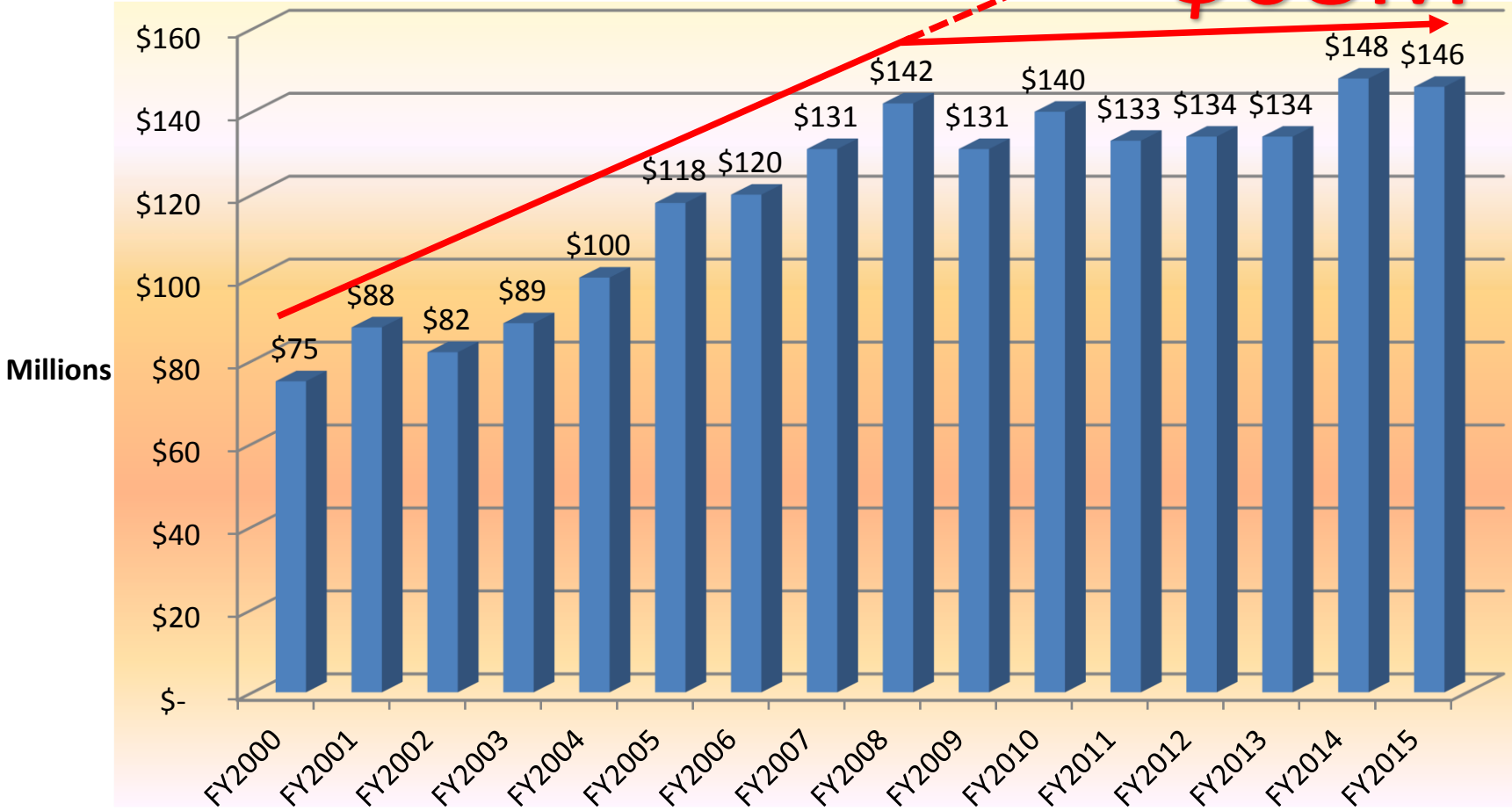


Figure 8. MUNIS K-12 Facility Energy Expenditures FY2000 - FY2015

\$68M



Avoided Costs

	FY14/15	Cumulative
Consumption	\$ 16,309,244	\$ 58,394,316
Rebates	\$ 284,395	\$ 1,752,310
Refunds	\$ -	\$ 846,098
Rate Correction	\$ 445,580	\$ 5,047,233
Rate Case	\$ 350,000	\$ 2,382,752
Total	\$ 17,389,219	\$ 68,422,710

ANNUAL SAVINGS POTENTIAL

Table 3. Annual Energy Savings Potential

Level	EUI	Incremental Savings	Annual Savings
Current	57.5		\$16.4M
ENERGY STAR	50	\$21.1M	\$37.5M
Best Performer	40	\$21.5M	\$59.0M

QUESTIONS ??????

