



# Board Report

Motz Engineering Update  
September 28, 2015



**DUKE ENERGY INCENTIVES  
FOR  
BOND LEVY PROJECTS  
FOR  
FOREST HILLS LOCAL SCHOOL DISTRICT  
SEPTEMBER 28, 2015**



SCHOOL	DATE	INCENTIVE AMOUNT REQUESTED	INCENTIVE AMOUNT RECIEVED
Anderson High School			\$0
Turpin High School			\$0
Nagel Middle School	TBD	\$10,500	\$0
Ayer Elementary School *	August 28, 2015	\$ 1,685	\$0
Maddux Elementary School			\$0
Mercer Elementary School			\$0
Sherwood Elementary School			\$0
Summit Elementary School			\$0
Wilson Elementary School			\$0
<b>TOTAL</b>	- -	\$12,185	\$0

\* COOL ROOF ONLY – More to follow for Ayer

# Wilson Elementary School

## Duke Energy - Energy Design Assistance



- Energy consulting services and predictive energy modeling
- Construction incentives for a package of whole-building energy opportunities – from building envelope, lighting and cooling to heat recovery
- Support for your project’s sustainability goals
- Savings calculations
- Measurement and verification
- Professional, unbiased engineers
- Comprehensive whole-building approach

The Process	The Upfront Cost
Duke has adopted a methodology that treats the entire facility as one project instead of managing the system in pieces.	The cost to enter the program is minimal and the district may qualify for up to 50 percent off the cost of the analysis.



# Wilson Elementary School Duke Energy - Prescriptive Incentives



- Building envelope improvements
- HVAC equipment improvements
- HVAC system-related improvements
- Indoor and outdoor lighting improvements
- Industrial energy improvements
- Food service
- Information technology

# Wilson Elementary School Duke Energy - Custom Incentives



Custom incentives are often offered for equipment that is not included in Duke's standard list of prescribed incentives. Custom projects can include but are not limited to:

- Green building design (new construction and renovation projects)
- Energy management systems
- Large variable frequency drives (VFDs)
- Air Compressors
- Unique process equipment
- Nonprescriptive lighting projects

These custom incentives require project approval prior to entering contracts, placing orders for equipment or beginning construction.

# Pre-purchase of MEP Equipment



## A/C Equipment

- AHS – 2 Chillers & 2 Towers
- Maddux – Air Cooled Chiller
- Summit – Air Cooled Chiller
- Wilson – Air Cooled Chiller

## Heating Equipment

- AHS – 1 Boiler
- THS – 2 Boilers
- Summit – 2 Boilers
- Wilson – 2 Boilers

## Electrical Equipment

- AHS – Generator
- THS – Generator – Maybe
- Wilson - Generator

## AHU Equipment

- AHS
- THS
- Wilson

# District Wide Building Automation System



- Bid package to be on the streets in mid to late November.
- All buildings will be equipped with the same control system which can be controlled over the Internet from virtually anywhere.
- We have invited five local contractors to demonstrate their capabilities and experience.
- We are making a field visit next week to Xavier University to look at their new system.

# Summit Geo-Thermal Evaluation



- The Geo-thermal option was investigated for Summit Elementary School.
- As I mentioned at the board meeting last month, the Summit building utilizes electric for its means of heating and cooling.
- Therefore, we anticipated greater participation from Duke Energy in terms of incentive monies.
- While the Summit payback was slightly improved over Wilson, we cannot in good conscience recommend a 25 year payback for geo-thermal.