



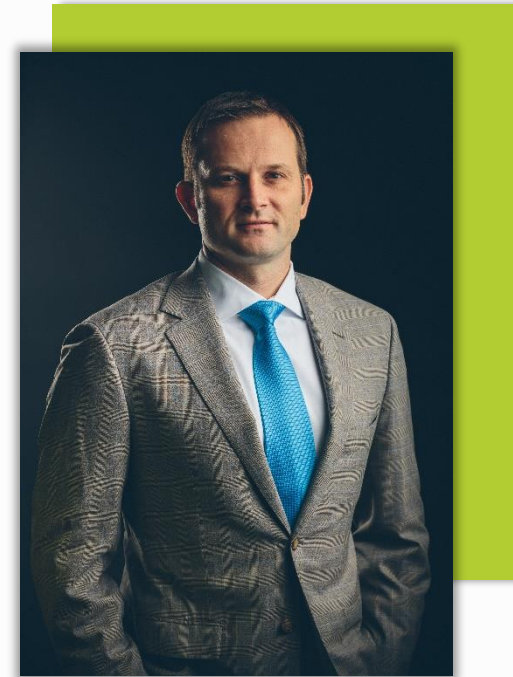
**entegrity**  
energy.integrity.

WALKING ON SUNSHINE!

# PRESENTERS



**Dr. Michael Hester**  
Superintendent



**Rick Vance**, *CEM, CxA, LEED BD+C*  
Business Development Executive

# BATESVILLE SCHOOL DISTRICT

At Batesville School District (BSD) our mission is to **Empower Today's Students for Tomorrow's Challenges**. We create space for opportunity and innovation because our vision is **Every Student Growing Everyday**. We are Pioneer Nation!

WANT MORE?

CHOOSE

B

Batesville  
School District  
STUDENTS FIRST



ACADEMICS



ATHLETICS



FINE ARTS



FAMILY

# ENTEGRITY SERVICES

Entegritiy is an Energy Services Company specializing in the implementation of energy conservation and renewable energy projects. Entegritiy is uniquely qualified to deliver innovative and sustainable solutions to **OPTIMIZE BUILDING PERFORMANCE.**

- Energy Savings Performance Contracting
- LED Lighting
- Commissioning & Retro-Commissioning
- Building Envelope & Building Testing
- **Solar / Renewable Energy**
- Water Conservation
- Energy Auditing & Energy Modeling
- Sustainability Consulting

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# THE NEED



# RETAIN STAFF



# ATTRACT STUDENTS



**Batesville**  
School District  
STUDENTS FIRST

INDEPENDENCE CO **#1** SCHOOL DISTRICT

# CONSTRAINED BUDGET

## Options for Batesville school restructuring presented to public





# THE OPPORTUNITY



# ENERGY SAVINGS PERFORMANCE CONTRACTING

Energy Savings Performance Contracting (ESPC) allows public entities to procure energy saving improvements with no upfront capital costs and repay the project cost with savings. All energy and operational savings required by law to be guaranteed by the ESCO.



- e NO UPFRONT CAPITAL**
- e PAID FROM SAVINGS**
- e GUARANTEED**

# ARKANSAS LEGISLATION

K-12 Schools

**2005 - Legislative Rule**

State Agencies/Higher Education

**2013- Act 554**

Cities & Counties

**2015- Act 1227**

**2011 - Amendment 89**



# BATESVILLE FACILITY OPERATION COSTS

## A. All Utilities, Base Year

Fuel Type	Unit	Base Year Usage	Base Cost (\$)
Electric	kWh	3,736,733	\$431,321
Natural Gas	MMBtu	8,997	\$69,222
Water	kGAL	7,116	\$106,660
<b>TOTALS:</b>			<b>\$607,203</b>

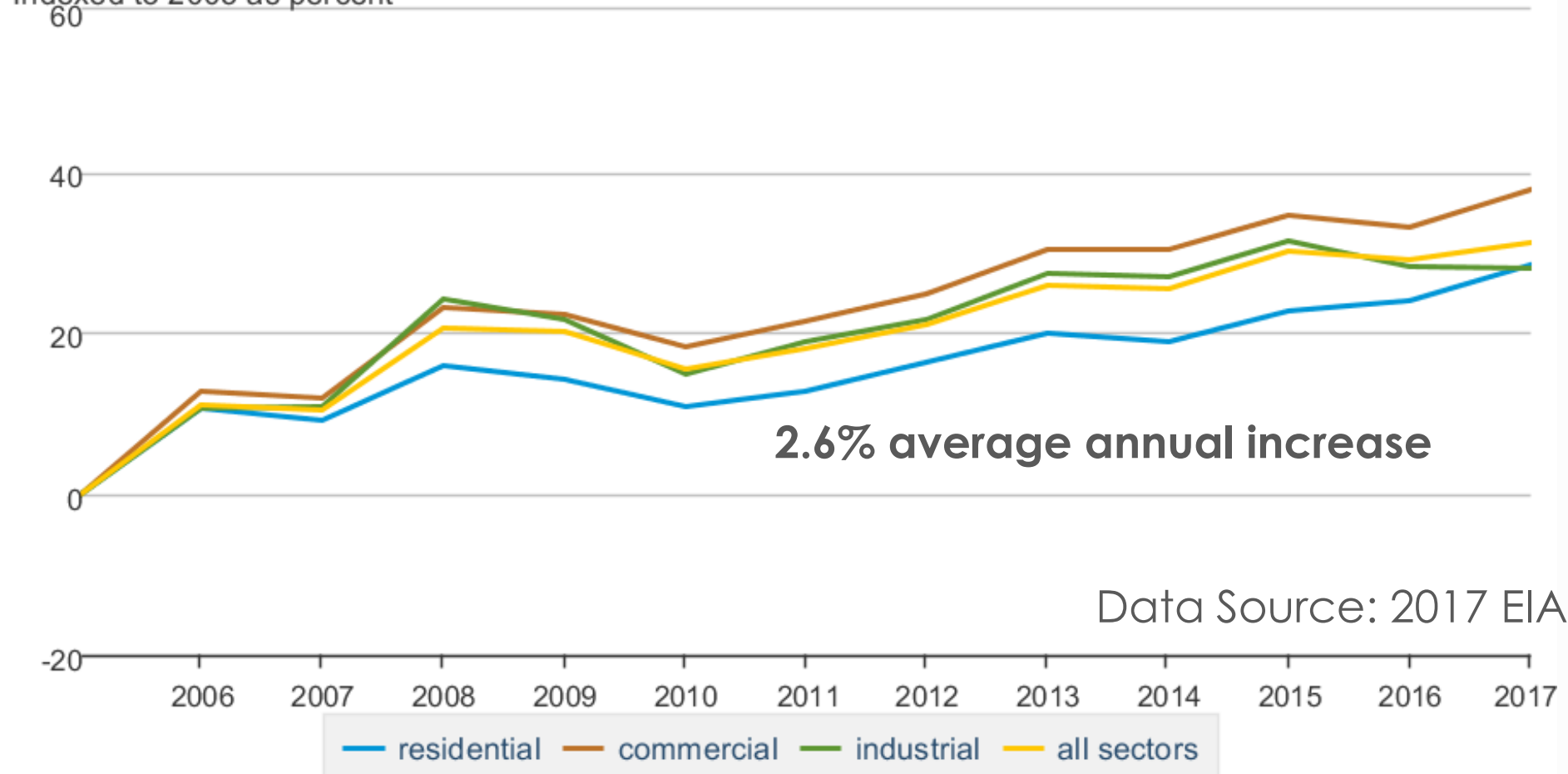
# BATESVILLE FACILITY OPERATION COSTS

Facility	Account Name	Annual Budget
Central Elementary School	HVAC Repair	\$4,447
Central Elementary School	HVAC Replacement	\$4,325
West Elementary School	HVAC Repair	\$5,760
West Elementary School	HVAC Replacement	\$17,350
Batesville Junior High School	HVAC Repair	\$1,975
Batesville Junior High School	HVAC Replacement	\$25,280
Batesville High School	HVAC Repair	\$8,330
Batesville High School	HVAC Replacement	\$33,035
Eagle Mountain Elementary School	HVAC Repair	\$5,144
Eagle Mountain Elementary School	HVAC Replacement	\$14,552
Sulphur Rock Elementary School	HVAC Repair	\$3,844
Sulphur Rock Elementary School	HVAC Replacement	\$9,723
Administration	HVAC Repair	\$2,654
<b>TOTALS:</b>	-	<b>\$136,419.00</b>

# ELECTRIC POWER COST INFLATION

## Average retail price of electricity, Arkansas, annual

Percent  
Indexed to 2005 as percent



2.6% average annual increase

Data Source: 2017 EIA Report



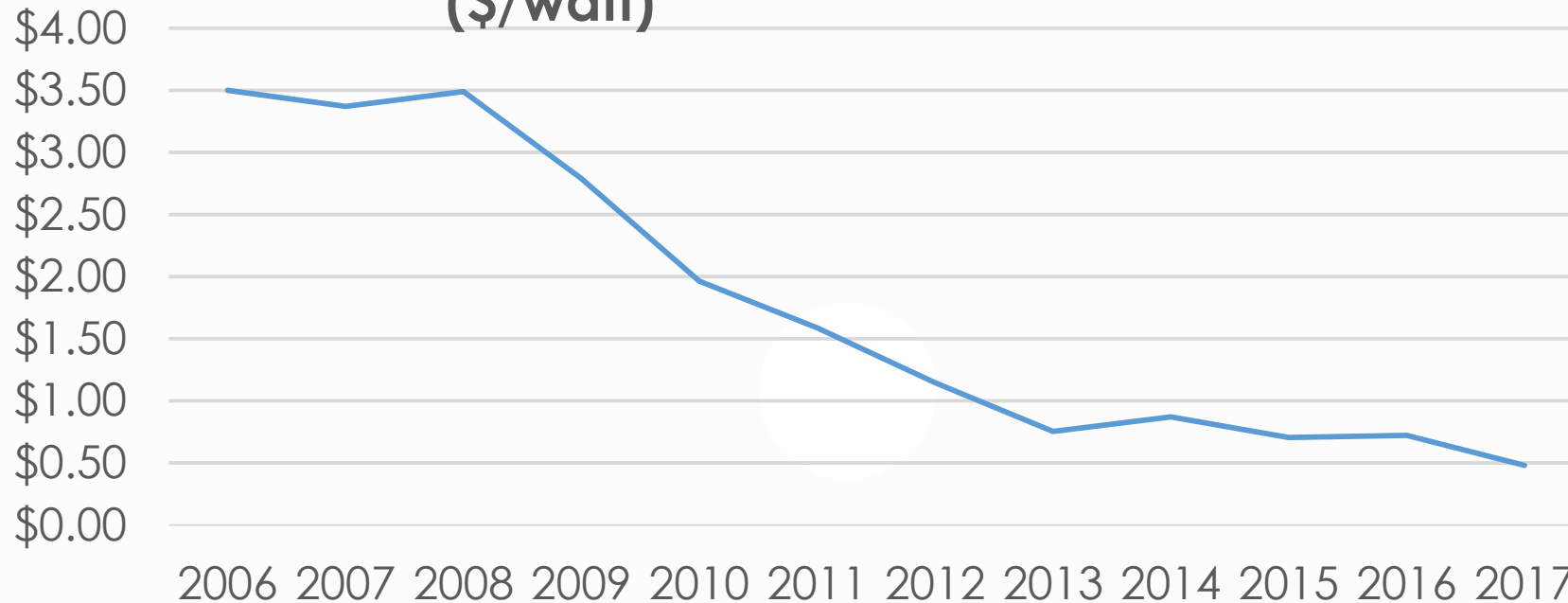
# WHY NOW?

- e Improved Technologies
- e Lower Implementation Costs
- e Historically Low Interest Rates
- e Rising Operational Costs
- e Available Financial Incentives



# SOLAR MATERIAL COST REDUCTION

Average value of photovoltaic modules,  
(\$/watt)



— Average value of photovoltaic modules,...

Data Source: 2017 EIA Report



*Independent Statistics & Analysis*

**U.S. Energy Information  
Administration**



# THE SOLUTION



# BATESVILLE PROJECT SUMMARY

## Project Benefits

- Approximately 40% reduction in electric energy
- Savings cover 125% of costs with positive cash balance each year
- Over \$200,000 in co-funding support from utilities
- Improved student comfort and student learning
- Enhanced building aesthetics, energy independence
- Integration of project with student curriculum



# BATESVILLE SCHOOLS PROJECT PROPOSAL

## Total Project Summary: All Measures

Location	Lighting	HVAC Equipment	HVAC Controls	Windows & Doors	Solar Energy	Water Conservation
Batesville High	All fixtures	17 units	All t-stats	22 windows, gym entry	600 kW	All campuses
Batesville JHS		28 units				
Sulphur Rock ES		14 units		42 windows, gym and front		
West ES				South entry only		
Central ES				12 windows		
Eagle Mountain ES						
Administration	↓	5 units	↓	16 windows		↓
Transportation						

# BATESVILLE SCHOOL DISTRICT

## Project Financial Summary



Project Cost	Energy/Water Savings	Maintenance Savings	Capital Avoidance Savings	Total Annual Savings
\$5,478,955	\$251,015	\$54,929	\$56,190	\$362,134

# ANNUAL SAVINGS SUMMARY

ECM 1: Lighting \$140,440

ECM 2: HVAC \$86,580

ECM 3: Envelope \$10,900

ECM 4: Water \$27,230

ECM 5: Solar \$96,850

**Total:** \$362,000+

**Total Rebates:** \$200,000+



THE SOLUTION

# PROJECT PERFORMANCE

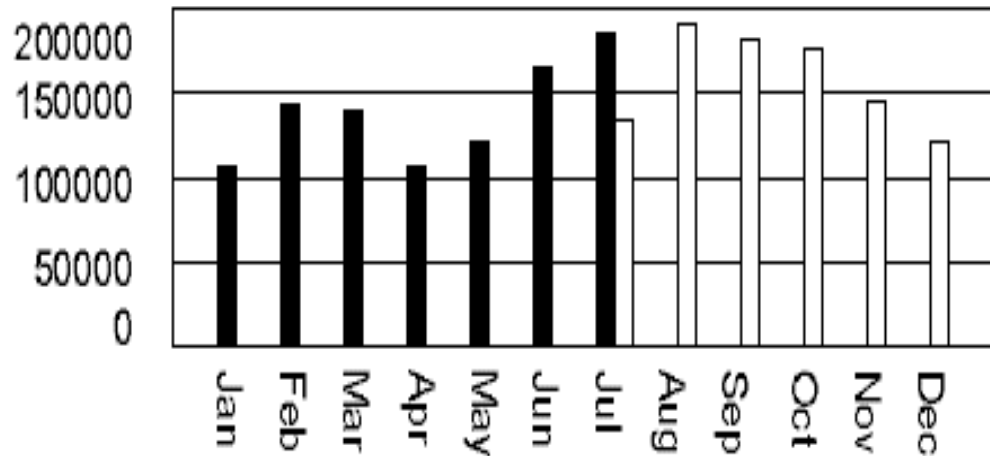


# SOLAR SAVINGS

## CONSUMPTION REDUCTION

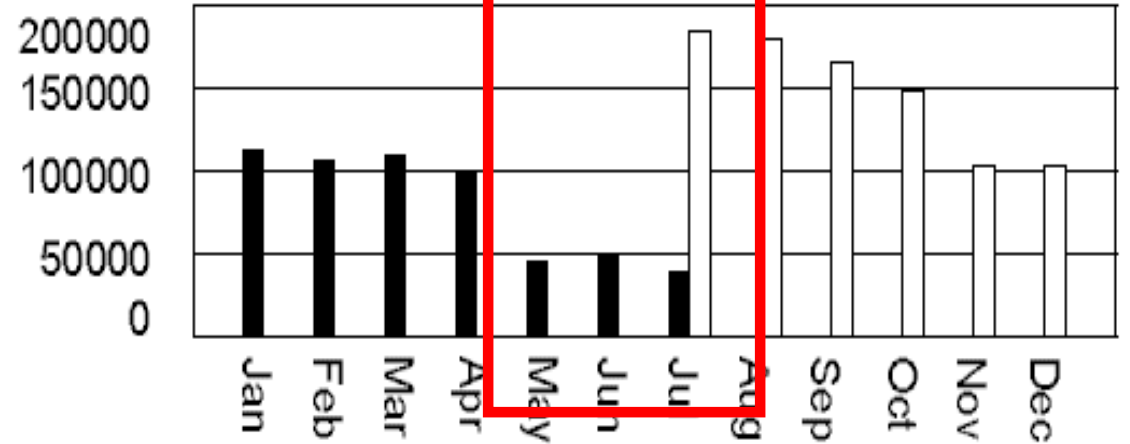
### Total Monthly Energy Usage

Billing Period	Billing Days	kWh Used	Avg kWh Per Day	2018	2017
Jul 2018	29	184800	6372.4	■	□
Jul 2017	32	134400	4200.0		



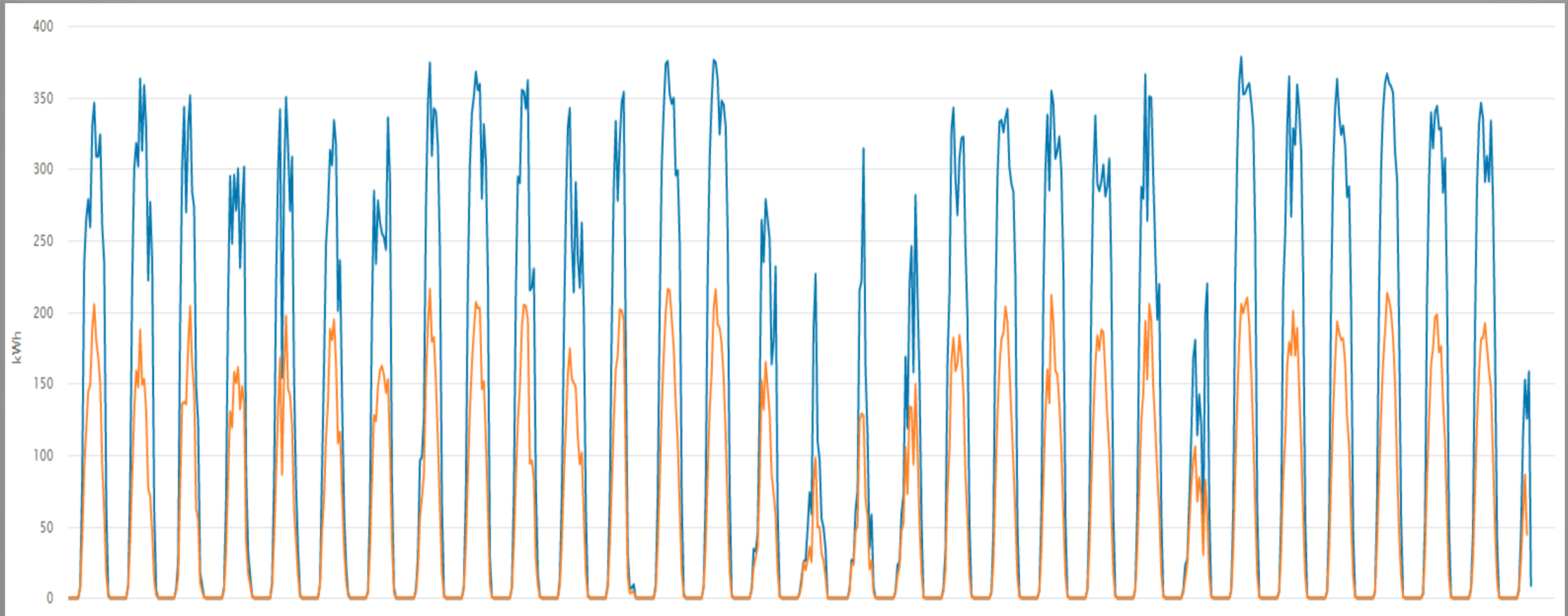
### Total Monthly Energy Usage

Billing Period	Billing Days	kWh Used	Avg kWh Per Day	2019	2018
Jul 2019	33	39200	1187.9	■	□
Jul 2018	29	184800	6372.4		



# SOLAR SAVINGS

**PRODUCTION = 149,862 kWh**  
**DEMAND REDUCTION = 180 kW**

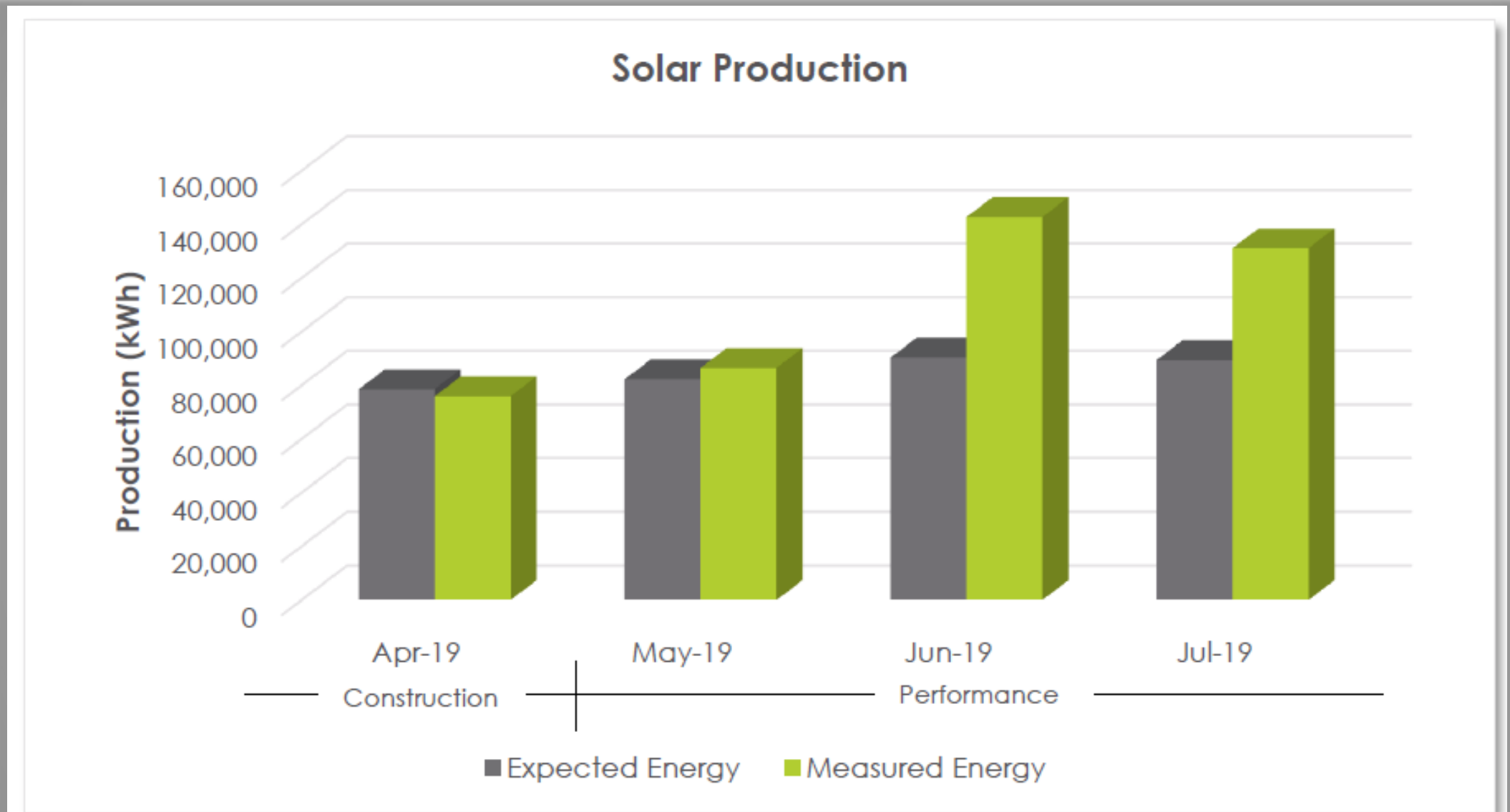




## 1-MONTH ELECTRIC BILL IMPACT

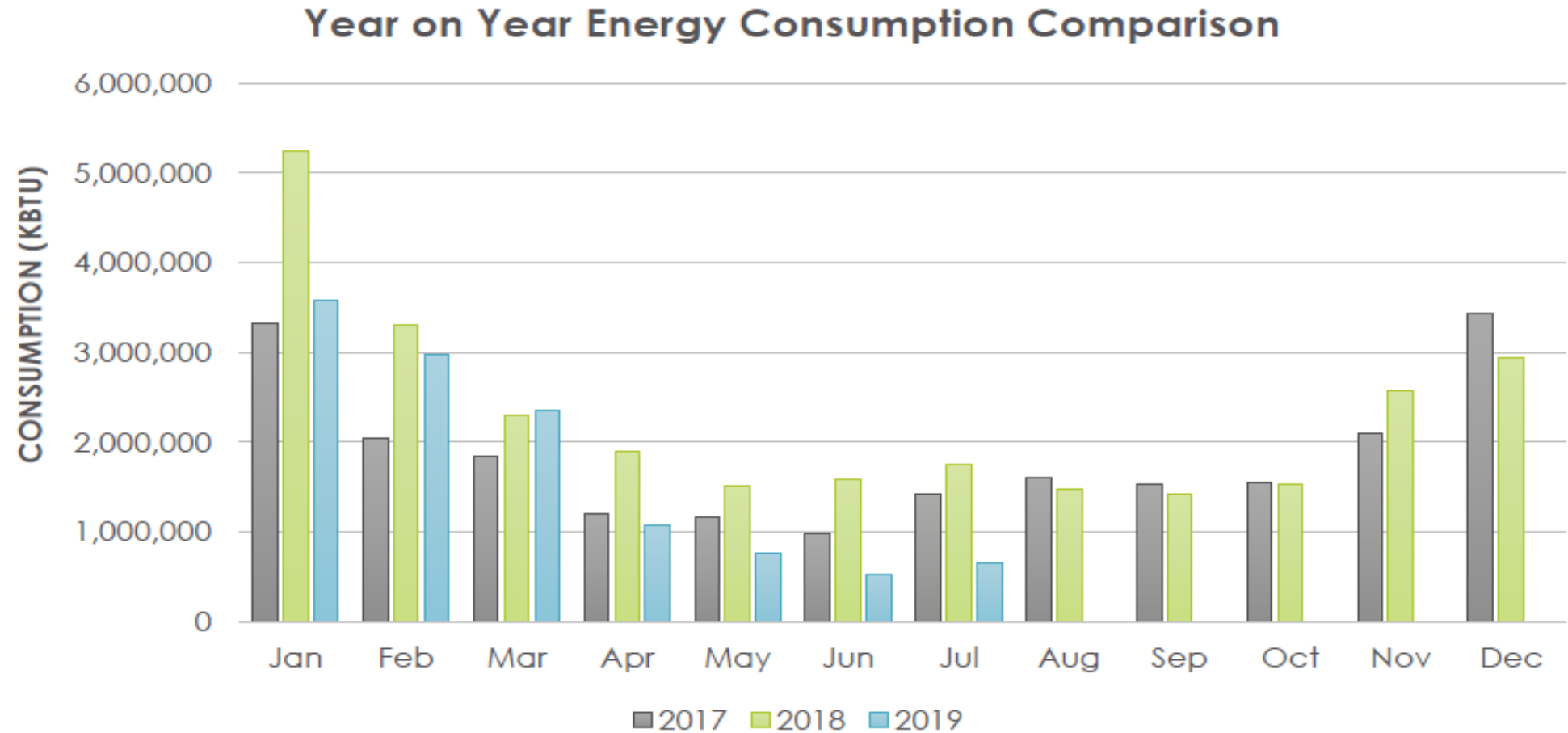
ITEM	AMOUNT
Current Bill	\$4,771
Current Bill No Solar	\$17,850
Gross Solar Savings	\$13,079

# SOLAR SAVINGS



# MEASURED SAVINGS

## Q-1 M&V DATA



# PROJECT REVIEWS



# POSITIVE PRESS

## Teachers given large raises after changes to district campuses



By Kirsten Pieri-May | April 19, 2018 at 9:13 PM CDT - Updated August 14 at 10:35 AM



(Source: KAIT)

BATESVILLE, AR (KAIT) - The Batesville School Board has approved a larger raise for its teachers this year after multiple efforts by the school district to save money and be more efficient.

The board approved a 1.25% raise for all contracted employees for the 2018-19 school year.

"When you give a percentage you are able to hit the step raises whether it's your experience and your degrees plus it also then affects the base," Batesville Superintendent Dr. Michael Hester said.

He said that will mean raises from about \$1,000 to \$1,300 raises depending on the teacher.

For the past three years, raises for employees have been at 1%, but this year, the school has committed to reducing its footprint and cutting energy costs.

### EDUCATION

## Solar powered partnership brightens Arkansas school's future

## School renovating buildings, adding solar power to save money



## BSD solar project is making it rain (money)

### Pay raises a direct result of solar windfall

**BY MADELINE PYLE**  
Special to the Guard  
The Batesville School District (BSD) made history by becoming the first school district in Arkansas to implement

Director Rick Vance said. "Annual cost savings for the district exceed \$113,000 due to the solar production."  
BSD Superintendent Dr. Michael Hester said that the

which was made possible by the project.  
Thanks to the money being saved on utilities, Hester said the district will reward teachers who have been with the

### Solar Power

**What:** BSD first in state to convert to solar  
**Result:** District infused \$1.2 million into pay scale for certified and classified staff this year

# STEM CURRICULUM

## STUDENT ENGAGEMENT

- ② Customized Student Engagement Programs
- ② STEM based Curriculums



LEARNING LAB

hands-on sustainability curriculum and resources to help K-12 educators bring classroom projects to life

[LearningLab.usgbc.org](http://LearningLab.usgbc.org)



74°  
 Few Clouds  
 Midtown Memphis FULL FORECAST  
 Search

“Utilities have been going up 2.1% a year for the last 10 years, so 10 years from now, you are spending 21% more of your budget on utilities than you are now. Well, that gets into teacher salaries and what you can do for

School renovating buildings, adding solar power to save money

Published: Tuesday, March 27th 2018, 9:55:00 AM  
 Updated: Tuesday, March 27th 2018, 9:21 pm CDT

Posted by Kirsten Pieri-May, News Producer - Reporter/MMJ [CONNECT](#)

BATESVILLE, Tenn. — Superintendent Dr. Michael Hester said Monday that the school board approved a plan to add solar panels to the high school campus to help pay for energy costs. “We have 20 light fixtures that are going to be changed out to LED,” Hester said. “We have low-flow [water] fixtures that are older. The newer ones are high-efficiency flow. So anything that’s old we are going to refit.”

Superintendent Dr. Michael Hester said the school board approved these changes after hearing a presentation from an outside company, Entegriety, at a special called meeting Monday night.

He also said they will replace and pressurize doors and windows across the campuses and replace many old HVAC units.


“Utilities have been going up 2.1% a year for the last 10 years so in 10 years from now you’re going to be spending 21% more of your budget on utilities than you are now,” Hester said. “Well that gets into teacher salaries and what you can do for kids so this allows us to keep that cost down.”

To combat that, the school will be adding solar panels to the high school campus that will produce just under 50% of the energy the district uses annually.



Dr. Michael Hester  
 Batesville SD Superintendent



An aerial photograph of a school campus. A long, narrow solar panel array runs diagonally across the middle of the image. To the right is a large, modern school building with a grey roof. In the foreground, there is a parking lot with yellow lines and a circular landscaped area with a flagpole. The text 'Q & A' is overlaid in large, bold, black letters in the center of the image.

**Q & A**

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