Creating Revenue Through Utility Savings:  
*Create Your Plan NOW*

Possible critical plans that can positively impact school operations during the COVID19 crisis.
Introductions

Belinda Kenley
*Vice President*
Energy Optimizers, USA

Ken Yockey
*Facilities Performance Engineer*
Four Seasons Environmental, Inc.
Who is Energy Optimizers, USA?

• Exclusive Focus with Ohio K-12 Schools

❖ **160** Energy Savings and Facility Improvement Projects in K-12 Schools

❖ Never missed a savings estimate *(average additional savings of 12.48% of estimate/guarantee)*
Who is Energy Optimizers, USA?

• Vendor-Neutral

❖ What is the most cost-effective solution for the district’s needs/wants?
Who is Energy Optimizers, USA?

• Sole Vendor selected by all 6 Ohio EPCs for LED Lighting & Energy Savings Program
  • Competitive bidding already completed
  • Faster implementation
Who is Energy Optimizers, USA?

- #1 Ohio K-12 School Energy Savings and Facility Improvement Company
- #1 HB264 Provider each year from 2011 – 2017 (switched to OCEPC and HB153 in 2017)

NEVER HAD A CHANGE ORDER
Our Services

• LED Lighting
  • Retrofits and Total Replacements
• Building Automation and Controls
• HVAC Upgrades and Enhancements
• Doors, Windows, Bldg. Envelope Improvements
• Security Upgrades
• Material ONLY Sales
Four Seasons Environmental, Inc.

Ken Yockey
Facilities Performance Engineer
Who is Four Seasons Environmental, Inc.?

• Employs 390 associates
• Provides professional services for Ohio schools, including energy management, commissioning services and maintenance plan advisor services
• Maintains and operates the CDC and other government buildings
Belinda Kenley
Energy Optimizers, USA
Common Terms We May Use

- ECM: Energy Conservation Measure
- EOU: Energy Optimizers, USA
- FSE: Four Seasons Environmental
- PPA: Power Purchase Agreement
Common Terms We May Use

• HB264: House Bill 264
• HB153: House Bill 153
• “Retrofit”: using an existing fixture, but changing the “guts” of it
Tips & Tools Utilizing Your Own Staff

- Keep mechanical systems clean
- Perform HVAC comprehensive maintenance
- Clean coils
- Using a shop vac, clean air handlers, univents and coils
Tips & Tools Utilizing Your Own Staff

• Clean Lenses of Each Light Fixture
Negotiate utility costs with providers if your district is not part of the EPC program.

Negotiate propane rates, if your district is not on natural gas.
Tips & Tools Utilizing Your Own Staff

Use a FLIR Camera to Check All Electrical Panels and Disconnects for Loose Connections (Potential Fire Hazards)
Invest in Solar

Solar generation is *not* affected by the current COVID-19 outbreak
Solar Power Purchase Agreement (PPA)

• Less reliance on utility provider by utilizing a renewable energy

• COVID-19 may have negative effect on electric rates (increasing) but solar rates likely lower
When is the right time for Solar?

Have you upgraded everything else in your buildings?

LED Lighting  Controls  HVAC Improvements  Kitchen Enhancements  Etc.

Do you have space & permission for a solar array?
What Do We Need to Consider?

• Roof Mount vs Ground Mount
  • Pros
  • Cons

• Who is your utility company?
Other Things to Consider?

- **Job Growth**
  - Benefits
  - Fastest Growing Industries

- **Educational**
  - Benefits
EOU & FSE Project Collaborations

Oak Hills Local Schools

• Project Cost: $4 million
• Annual Savings: $408,000

Springfield Holland Local Schools

• Project Cost: $3.8 million
• Annual Savings: $359,000
EOU & FSE Project Collaborations

Monroe Local Schools

- Project Cost: $694,000
- Annual Savings: $96,000

Ripley Union Lewis Huntington

- Project Cost: $883,000
- Annual Savings: $81,000
Ken Yockey
Four Seasons
Environmental
Using the School District’s DDC Control Systems

Possible critical strategies

Top down implementation

Discussion points for your team

Short term and long term building operational plans

Create target goals

Can budgeted funds for utilities be reallocated for instructional purposes?
Placing all buildings in unoccupied mode or holiday mode.
Using the building DDC controls systems to keep the buildings in unoccupied mode.
Making a critical operational plan.
The unoccupied heating set points were lowered to cut down on the natural gas consumption and equipment cycling.
Equipment might require manual lock out to prevent operation.
Lockout heat pump units from operating or cycling.
Lock out the boilers so they do not operate.
Lockout the high efficiency boiler using the touch key pads.
If boiler plants are needed to run reset the run conditions.
Many schools have been set unoccupied since March 12. Classrooms are now 57 to 63 degs. in many cases.
Planning for chiller operation.
Can the utility dollars for chiller operation be repurposed for other needs?
Making a chiller operational plan. Chillers are expensive to operate and maintain.
An important consideration! Floor wax! Thousands of dollars are spent in Ohio schools each summer to dry floor wax!
Could these dollars be repurposed to meet other needs?
Develop a critical summer building operational plan.
Turn off the building dehumidification mode in the DDC controls.
Make weekly walk through of the building, checking the temperatures and humidity levels.
Manually lockout of all dedicated outside air equipment (DOAS Units) while schools are unoccupied or out of session.
When possible, lockout the air handling units as part of the summer operational plan.
When systems operate during the summer mode review the unoccupied cooling set points. Determine how long equipment will operate or cycle.
Manually shut down the gym air handling equipment. Monitor each one with a weekly walk through.
Manually shut down the cafeteria air handling equipment.
During times of prolonged shutdowns, it is critical to check for flush valves that are not turning off. A direct impact to water and sewer spend.
School swimming pools - a complex discussion.
Belinda Kenley
Energy Optimizers, USA
The Value of an Energy Audit
Our Offer to BASA Members...

• No Cost Energy Audit
Thank you for your participation, BASA Members!

We are thinking of you during this time of financial and educational hardship!

#AloneTogether
Questions?
See our contact info on the next slide!
Contact Us for Help!

Belinda Kenley, EOU
937.974.1549
bkenley@energyoptusa.com

Ken Yockey, FSE
513.646.3848
kyockey@fseinc.net