

Ohio Energy Savings & Management Conference

“Green = Green”

How the Environment and Economics can and
must walk in step with each other

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Economic of Sustainability ROI

1. Waste management & recycling
2. Oiler Energy Program (OEP)
3. Control your energy and earn \$\$\$\$
4. How to produce your own energy
5. How to change the culture of your Stake Holders
 - “Buy-in” from your people is imperative to have programs be successful.

What are smart **Investment** options with the best **Return**...

Waste Management

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- Current cost
- Infrastructure
- Recycling
- Composting
- Solid waste
- Supply chain management; less plastics on campus via vendors & who will take my recycling??
 - **Potential solid ROI, but very difficult to change culture and manage on a daily basis**
 - **Grant monies available in this area**

Oiler Energy Program (OEP)

Here are first steps everyone can do “in house” to get this process started:

Average annual spent on utilities:

- \$3m in utility spending 18-19

Building energy audit

- Average Annual per sqft energy cost for efficient “like” buildings = \$1.30-\$1.50
- UF was at \$2.40 in multiple buildings and around \$1.80-\$1.90 in most others

What’s the reason for extensive cost per sqft??

- Lighting
- HVAC Systems
- HVAC Controls
- Building Condition
 - Windows, Insulation, Doors = Heat Loss

OEP Continued

3 Main Areas of Focus: Lighting, HVAC Units, HVAC Controls

1. Lighting conversion to LED

- 32 watt bulbs to 12 watt
- Rebates
- “Soft cost savings” changing bulbs, disposal, ordering
- Great ROI (1-2 year return)

2. HVAC Units

- Outdated poor running equipment

3. HVAC Controls

- Non existent controls

OEP Continued

What's the next step.....???

I know the problem, but I don't have the \$\$ to fix it.

To obtain these funds you will have to put together a proposal to bring to a financial institution for funding.

Options: (Remember; you are only as good as the people that surround you)

1. Contractor

- To reverse back, there are companies out there that will take this project for you from start to finish creating a “turn key” solution.
- They will also set up a long term controls contract to assist in energy controls and management.
- This will increase your investment cost significantly, but if you do not have the ability to manage a job such as this, it is still a very viable option.

OEP Continued

2. Keep it in house

- Unless you have the labor force & skill level to perform everything yourself or within your own company you will still have to use contractors.

Lighting:

- There are many lighting companies out there that will go building by building and count, order, and perform the rebate paperwork.
- Installation of the lighting was performed by one of our trusted electrical contractors

HVAC:

- Again, you have to find the right company. We were lucky and found a HVAC company that performed both HVAC installation and Controls and we kept proprietary rights over our software controls package.

By cutting out the “middle man” we saved millions of dollars in cost, but I warn you that this a VERY difficult thing to manage. Everyone's business is different and only YOU can determine your “in house” capabilities..

Controlling Your Energy = \$ Saved & \$ Earned

\$\$\$ Saved

- Reduction in energy usage by controlling your occupied and unoccupied scheduling
 - Scheduling your rooms properly can equal big dollars throughout the year. Even something as little as a 2 degree reduction in “unoccupied” temps will be significant savings over a 24/7/365 time frame.
- Reviewing energy use for your buildings and understanding how and when your buildings are consuming
 - Do you have energy spikes at 2am or other unnecessary energy usage (weekends, holidays)
 - Can you schedule your buildings to utilize cheaper energy during off hours
 - What systems impact your energy use the most
 - Air handlers, Chillers, Boilers....
 - What are your “start up times”
 - Does all of your equipment kick on at the same time which will create “peaks” in demand load.
 - How long does it take your buildings to get up to “occupied” temps

Controlling Your Energy = \$ Saved & \$ Earned

\$\$\$ Earned

The following are programs available with the ability to control your energy. This energy control function opens up access to programs that will actually pay you for this capability along with reducing your annual “Peak Load” rate.

- Demand Response & Peak Control
 - Controlling your energy during the hottest or sometimes coldest days of the year for an extended period of time (1-4 hours) to reduce your “Peak Demand” load rate which sets your charges for the rest of the year. Also, getting paid per MW controlled.
- Synchronous Reserves
 - 10 min notification to control your energy load for 5- 30 min.
 - Must be able to prove ability to control in that time frame and be under contract.
 - \$\$ paid for participating and ability.
- Transmission Control
 - This is a more complicated energy equation. But the base premise of it is controlling your energy demands and paying a separate rate for controlled energy use per KWH.

Producing your own power (Behind the Grid)

There are many, many, many different things to consider when producing your own power through Solar or Wind. Here is a very high level overview of things to consider:

1. “Footprint”

- Do you have the space for Solar (ground mount or roof)?
 - Understanding what are the positives/negatives
- What are the rules for wind turbines in your area?

2. Funding

- Are you going to upfront the cost through capital?
- Power Purchase Agreement (PPA)
 - Set kwh rate over 20-25 years, but no upfront cost

3. Infrastructure

- Do you have separate meters for your buildings, or is this just for one (Ball Metal, Whirlpool)?
- Do you have the ability for a substation if you do have multiple buildings?

Changing your Corporate Culture

“Love Orange Live Green”

As stated previously, we created a slogan to help encapsulate the overall sustainability message. I believe that it has to encompass all aspects of “Awareness”. You can’t tell your stake holders that you care about the environment and being “Green”, while throwing away aluminum pop cans while drinking out of a plastic disposable water bottle.

This will be one of your greatest challenges, but is imperative to the overall success of the program. The more your people buy into this message, the easier it is to make institutional changes and have everyone be on board. The more commitment, the more savings.

Some quick tips to help this message:

1. We are doing our part to protect the environment and the future we are providing our children.
2. Through efficiency savings we are helping strengthen the economic stability of our business, which in turn = a continuous pay check for the employee.
3. Setting up rewards programs and incentives:
 - Utilizing recycling \$\$ to buy meals/coffee, or clothing (hats, shirts, coats)
 - Reduction in energy usage = same type of incentives (pizza parties, clothing, events)