



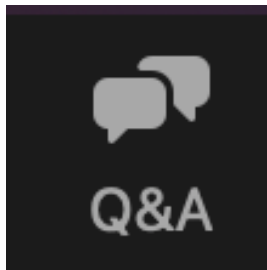
Industrial Customer Contractor Best Practices

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We look forward to hearing from you

Please put all your questions into the questions section with this icon.



Industrial Overview

Prism Energy Services



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What is Industrial?

- The production, distribution, and storage of products
- Run time is typically in 8-hour shifts
- The space can be either conditioned or unconditioned depending on the type of product
- Generally motivated to optimize the site and employee productivity
- Compared to other verticals they have large square footage but lower energy density, especially in unconditioned spaces
- Learn and understand what the process is so you can identify overuse

What type of equipment would we find?

- **Lighting**
 - Most likely Hi-Bays existing
 - Occupancy sensors as applicable
 - Timers and schedules based on number of shifts
- **HVAC**
 - Can be either conditioned or unconditioned space
 - Conditioned space would typically have RTUs
 - Unconditioned space would typically have space heating
 - Typically, thermostat-based controls
- **Process Equipment**
 - Hot water
 - Steam
 - Chilled Water
 - Compressed Air

What type of projects are available?

- **Upgrade**
 - High ROI – typically due to high lumen requirements
 - Safety – OSHA and IES standards motivate customers to upgrade
 - Sensors – Great value due to low foot traffic especially through racking and storage
 - Transformers – Generally easy to access and past EUL
- **HVAC Upgrades**
 - In conditioned applications typically aging infrastructure must be upgraded
 - Common for equipment to be well past EUL and operating well below design efficiency
 - Adding a controller for all HVAC equipment can assist with over cooling especially with loading dock doors
 - Great application for setback control based on the number of shifts
- **Process Upgrades**
 - Compressed Air can see significant savings both on the leak detection and full replacement
 - Optimizing existing chiller and boiler systems that serve process equipment



WHAT DOES AN INDUSTRIAL PROJECT LOOK LIKE?



Energy Efficiency for Industrial Customers

Industrial energy efficiency is crucial for reducing costs and environmental impact. It plays a significant role in achieving sustainability goals by optimizing energy use in industrial processes.



WHAT TO EXPECT:



ENERGY ASSESSMENT

Analysis of current energy usage in industrial processes, identifying areas with the potential for improvement.



PLANNING & DESIGN

Tailored project plans are developed, taking into account the unique needs and characteristics of the industrial facility.



IMPLEMENTATION

Install new technologies, modify existing processes, and train staff for efficient operation and maintenance.



MONITORING & VERIFICATION

Post-implementation, the project's performance is tracked using specific metrics to ensure sustained energy savings.

Common Measures for Industrial Facilities

- LED Lighting
- Energy Mgmt System
- Steam Traps
- Compressed Air
- Process Improvements
- Boilers
- Chillers
- VFDs
- Pipe Insulation
- Building Weatherization
- Air Curtains
- HE Transformers
- Generators
- Dust Collection
- Fume Hoods
- De-Strat Fans

Outcomes



Energy Savings



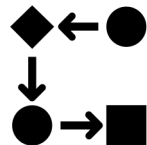
Cost Savings



Environmental Benefits



Technology Upgrade



Process Optimization



Things to Consider

- Working around operating schedule
- Working around equipment
- Minimize Disruption



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THANK YOU!



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Inovis Energy is a turnkey energy solutions provider.

We are a Mass Saves partner and preferred vendor with the MA utilities.

Day in the life of an Industrial project

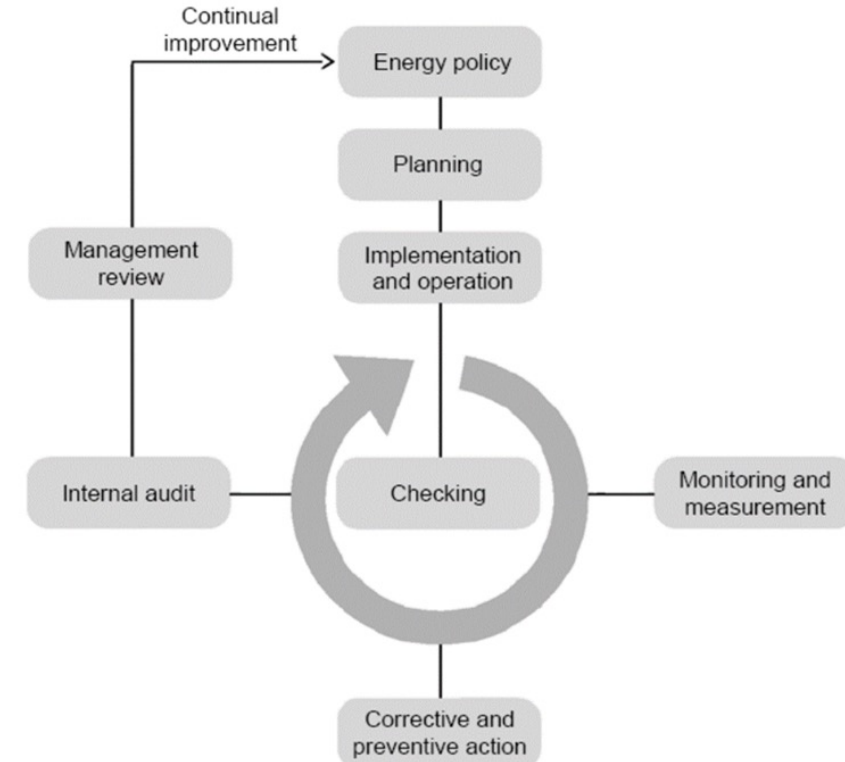
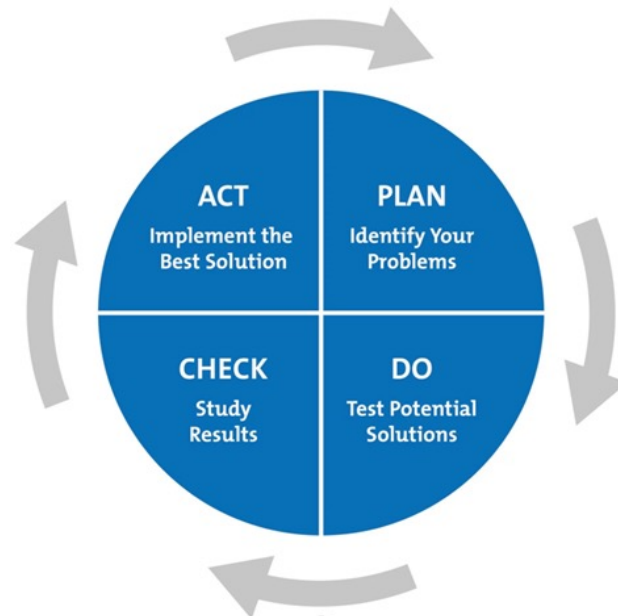
- Industrial customers are unique and require specialized skill set
 1. Communication – across all stake holders is most important
 - Customer service, people skills, set expectations
 - Industrial customers have wide range of stake holders that require different conversations
 - CEO, CFO, Facility Manager, Maintenance Manager, Process Engineer, Line Operator
 - What are our goals? What are the problems?
 2. Know-How – how do we accomplish tasks in a timely and efficient manner
 3. Knowledge – industrial process are often confusing, lots of moving parts.
 4. Trust – #1, #2, #3 above help to establish TRUST.

Process Optimization

- Utilize ISO 50001 'type' approach/methodology

ISO 50001/50021 PDCA Process:

- Plan – How can ISO methodology assist manufacturers w/ efficiency
- Do – importance of understanding the process – not just lighting/etc.
- Check – How to review identified areas of customer focus for results
- Act – Corrective actions - Examples of how the process is helping industry
 - Rinse and Repeat....



Process Optimization

• ~~What is going IN and what is going OUT?~~

What Energy is Consumed?:

Electric Uses:

- Compressed Air →
- Chilled Water →
- Motors/Fans/Pumps →
- Electric Heat →

NG/Fuel/Other Uses:

- Direct Fired Equipment →
- Steam →

Other: →



What is Produced

Widgets:

- Pounds of Material →
- Length of Material →
- Volume of Material →

Other:

- Scrap →
- Waste →
- Etc..... →

• Increased throughput

• Industrial laundry example

- Customer has increased business (lbs of laundry). They can increase operating shifts OR optimize process and increase throughput (lbs/hr of laundry)
 - New high efficiency wash line, new dryers, new ironers, new boilers

Resources are available to help!

- Scoping Studies
- Focus Studies
- Data logging, monitoring, metering
- Work closely with vendor partners
- Savings analysis
 - Energy savings
 - Non – Energy Benefits
 - Labor savings
 - Water savings
 - Maintenance savings

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Questions?



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