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Business and Energy Sustainability

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We look forward to hearing from you

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



Q&A





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Agenda

1

Overview of BES Benefits

2

PRIME

3

EUA

Technical Assessment for Manufacturing

4

**Retro-Commissioning/Virtual
Commissioning**

5

SEM

6

Questions and Answers

Overview of Business and Energy Sustainability (BES)



Benefits of BES (PRIME/EUA/RCx/SEM)

- BES programs integrate well with sustainability goals
- Provide unique support for manufacturing
- Includes cadre of approved contractors with strong expertise



Process Re-engineering for Improved Manufacturing Efficiency (PRIME)



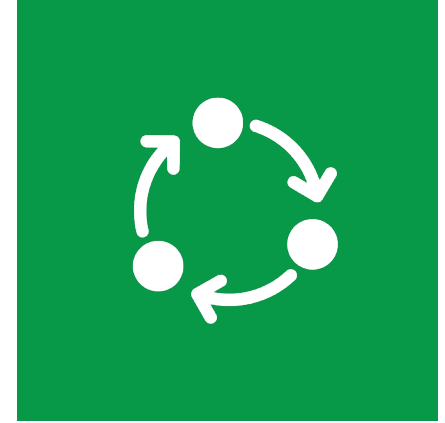
Process Reengineering for Increased Manufacturing Efficiency



- Improve product quality
- Improve production efficiency
- Improve throughput



- Implement lean manufacturing techniques



- Attain measurable process improvements and waste reduction

PRIME Eligibility Small Manufacturing Pilot

1

Manufacturing customers with electric demand < 150 kW to participate in PRIME

2

Same program offering

3

Customers examined on a case-by-case basis

4

Ensure that the opportunity fits the objectives of a PRIME project

5

Three customers currently participating

6

Adoption based on pilot results

Current Situation

- 46,300 Units/Year
- 89.9% On-time delivery
- 21.4 Day lead time
- 12 Hour changeover time

Kaizen Objective

- 55,500 Units/Year (20% increase)
- 95% On-time delivery
- 14 Day lead time
- 4 Hour changeover time

Kaizen Activity

- Measured current and future states of changeover process
- Identified 32 potential solutions to streamline material flow
- Prepared no/low-cost solutions
- Highlighted solutions to shorten changeover time

Kaizen Results

- On track for 66,140 Units/Year
- 98% On-time delivery
- 14 Day lead time
- 4 Hour changeover time
- 36,873 annual kWh savings

Eversource PRIME Customer Success Story

Date: January 24 – January 28, 2022

Customer Type: Tool Manufacturer

Project Area: Utility Tools Milling Department

PRIME Consultant: CONNSTEP



PRIME Incentives

- Events **one and two**: Paid 100% by the utility
 - Capped at \$9,000
- Events **three and four**: Paid 50% by the utility
 - Capped at \$4,500

Approved PRIME Consultants

Eversource:

- CONNSTEP
- Daniel Penn Associates
- Leanovations
- New England Lean Consulting
- Sixth Floor Consulting Group

UI:

- Daniel Penn Associates





Energy Utilization Assessment (EUA)

Energy Utilization Assessment (EUA)

- The EUA is a process-focused comprehensive energy assessment for an industrial facility.
- The assessment will produce a detailed report for the customer
- The assessment is intended to move to project implementation



Energy Utilization Assessment (EUA)



Facility walk-through



Comprehensive facility assessment



Detailed assessment report



Energy Utilization Assessments Incentives

Eversource and UI will provide the following incentives for participating EUA customers:

- 50% of the study cost upon delivery of report
- \$0.05/kWh and \$0.25/CCF per annual savings for measures implemented from the report – up to 50% of the remaining study cost

Approved EUA Consultants

Eversource:

- Loureiro Engineering
- QGM Consulting
- Cascade Energy

UI:

- TRC Engineers
- Loureiro Engineering
- JK Muir
- DNV Energy Insights (ERS)





Retro-commissioning (RCx) and Virtual Commissioning

Retro-Commissioning (RCx)

Retro-Commissioning helps your facility reduce waste energy with a study that identifies operation and maintenance and equipment control strategies.

The ultimate goal of the RCx program is to enhance control strategies to improve building energy performance.



Retro-Commissioning (RCx) Eligibility/Process

- Customer facilities over 100,000 square feet
- Requires DDC based EMS with trending capabilities
- Requires ENERGY STAR Benchmark
- Customer to submit RCx Application available on www.energizect.com
- **No-cost survey** provides scoping of opportunities
- Investigation (with customer co-pay) provides more detailed review of opportunities and savings
- Implementation of Identified measures





Retro-Commissioning Incentives

RCx incentives offerings are as follows:

- 50% of the investigation paid
 - Capped at \$20,000
- Co-pay refunded if 50% of high impacted measures are implemented
- Incentives for implementation of RCx Measures:
 - Greater of \$.50/kWh or \$1000/kW and \$5/ccf
 - Implementation incentive capped at 50% of installed costs

Retro- Commissioning Approved Vendors

Eversource:

- Burton Energy
- Colliers International
- DNV
- Resource Innovations
- Sustainable Engineering Solutions
- The Stonehouse Group
- Wendel Energy Services
- Environmental Health and Engineering

UI:

- DNV Energy Insights (ERS)
- Rethinking Power Management (RPM)





Virtual Commissioning (VCx)

UI Customers only

Virtual- Commissioning (VCx)

This is a unique, no-cost program that takes an innovative approach to finding Operational & Maintenance energy savings.

Done completely virtually, the vendor will analyze your AMI meter data related to weather, facility type, and other operational details to discover unseen energy savings opportunities.





Strategic Energy Management (SEM)

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Strategic Energy Management is a continuous process of planning, implementation, and monitoring energy consumption and operational practices to provide a path for achieving energy-savings goals



Ad hoc Approach to Energy Management

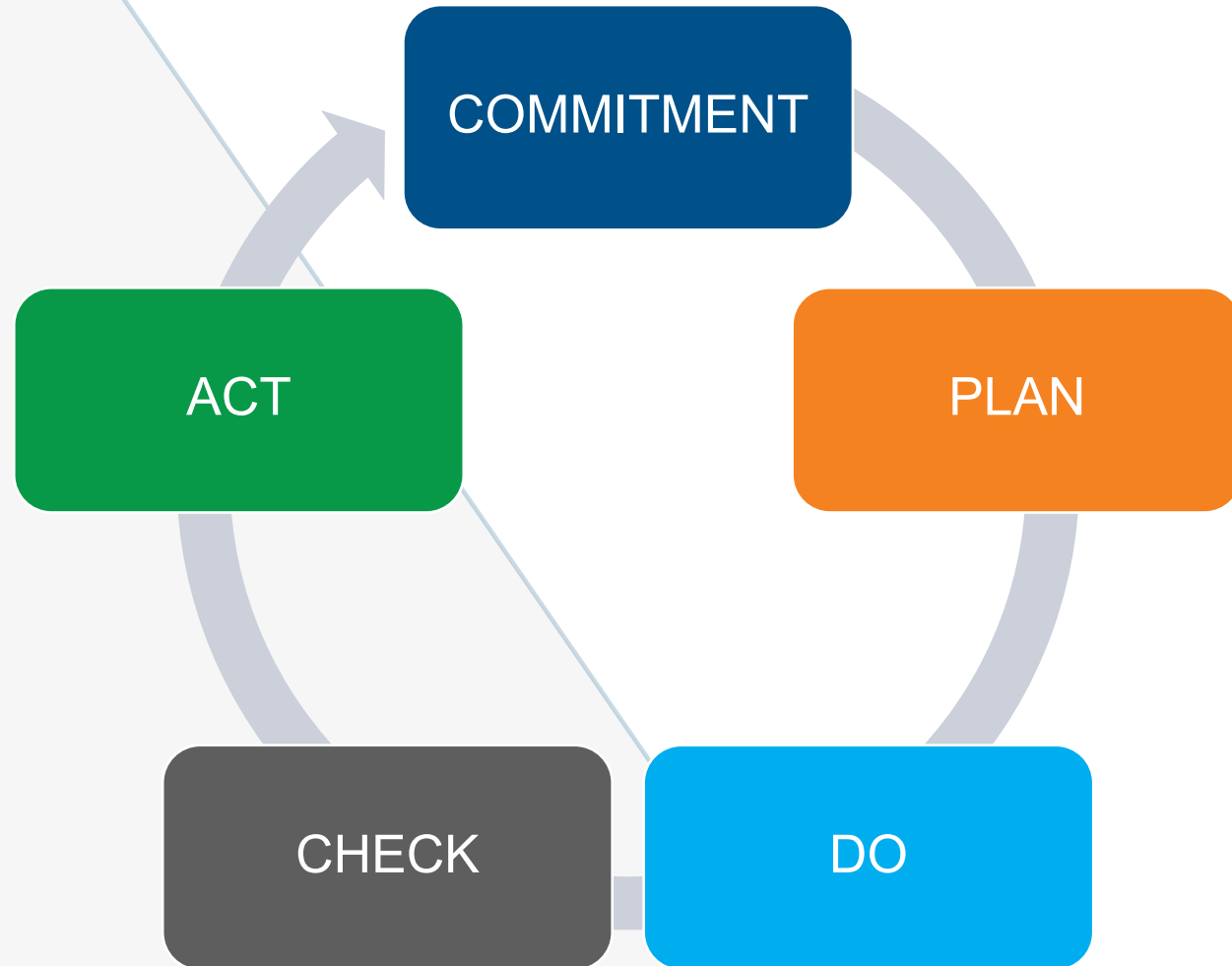


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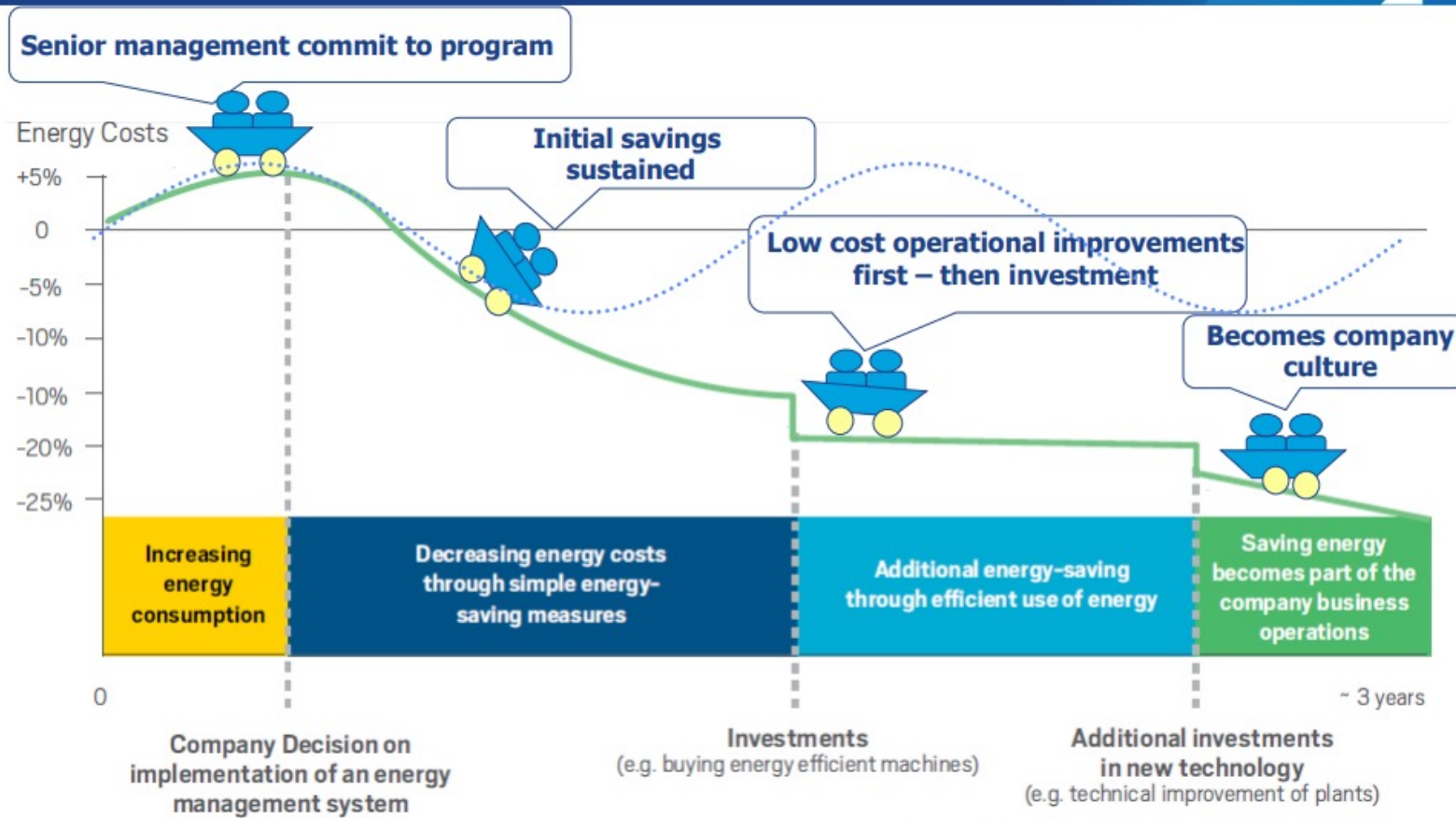
Source: UNIDO 2010



SEM- Structured Approach to Energy Management



Structured Approach to Energy Management



4

Source: Kahlenborn et al. (2012), based on Lackner & Holanek (2007)



What are the key benefits of SEM?



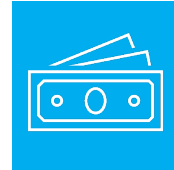
Reduced Energy Costs



Customer Recognition



Reduced Carbon Footprint



Potential for Utility Rebates



Improved Operations



Collaboration with Experienced Coaches

Eversource SEM Incentives

- Incentive currently provide fixed incentives for SEM Measures implemented
 - \$1,000 for 1 or 2 low/no-cost SEM measures
 - \$2,500 for 3-5 low/no-cost SEM Measures
 - \$5,000 for >5 low/no-cost SEM Measures



UI SEM Incentives

UI incentives for verified SEM energy savings are currently:

- \$0.02/kWh
- \$0.10/CCF



SEM Approved Providers

Eversource:

- Cascade Energy
- Energy350

UI:

- CLEAResult Consulting





Questions

Thank you

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