Importance of Energy Projects

Cutting Energy Costs - Policy and Practice
Why are energy projects important...
Plain and Simple...

The cheapest kilowatt is the one that you do not use...

But Why?
Energy Markets

Don’t bet the farm!
The markets are volatile... and not under our control
Procurement Results

Not always in the bag!
Procurement savings are good…

$24,874,567

But not great?
Energy Efficiency
Reducing cost for a sustainable future!
Energy Productivity Index

![Graph showing energy productivity index over years with two lines representing MWh/USD and MT/USD.]
Revenue Growth

82% Sales Growth
7 Billion to 13 Billion
Absolute Energy Usage

13% Total kWh
Energy Productivity Index

52%
219 to 105
Use (MWh)
MM Sales $
$140,000,000
Back to the bottom line since 2004!
Absolute CO2 Reduction

4% Absolute CO2
CO2 Intensity Reduction

43% MT CO2

MM Sales $
It is official...
Efficiency is the “Big Dog”!

Could you move? Your blocking the sun!
Some key points about...

Parker’s Program
Energy Program Elements

Corporate Energy Policy
Enterprise Energy Goals
Division Energy Scorecards
New Buildings Standard
Equipment Standards
Energy Efficiency Tool Kit
Division Energy Leaders
Energy Training Workshop/Training
Energy Action Plans/Project Tracker
High Performance Energy Teams
Lean Manufacturing Culture
Last but not least...

A Success Story
Parflex Division
Reduces Energy Productivity Index

![Graph showing energy intensity from 2010 to 2013]

- 2010: 363.3
- 2011: 172.1
- 2012: 137.7
- 2013: 159.9

Energy Intensity
Revenue Growth

53% Sales Growth
Energy Productivity Index

56%  
363 to 159  

Use (MWh)  
MM Sales $
Absolute Energy Usage

31% Total kWh
$2,274,192

Back to the bottom line since FY 2010!
Procurement savings are good...

$612,579

But not great?
Efficiency wins again!

Not you again!
Energy Management
Parflex Division - Ravenna, OH

Reducing Energy, Increasing Sustainability
Manufacturer of Thermoplastic Hose & Tubing

Jeff Blake, Manufacturing Engineering Manager
Implemented Energy Savings Items

- 4/09 Dryers off on weekends
  - $3,600 per month
- 6/09 HVAC set-back programming
  - $10,109 per year
- 10/09 Plant lighting change
  - $285,000 per year
- 1/12 Process Dryer change
  - $80,000 per year
- 2/12 Air Compressor change
  - $17,465 per year
Lighting Project Results

- Existing lighting consumed 5.3 Million KWH per year (1,752 fixtures) (buzz, generate heat, slow to fire up)
- New lighting will consume 1.6 Million KWH per year (1,641 fixtures)
- 71 Smoke Hatches become Skylights
- Total project cost $373,755
- Savings $285,000 per year
- First Energy Rebate $207,000
Office Lighting Changes

Occupancy Sensors

Bulb Reduction
Plant Lighting Features

Motion Sensors

Skylights
Process Dryer Change

• ODOD Energy management program
  • Energy diagnostic session 5/28/2010
  • Envita One-2-Five Diagnostic Tool
  • Energy plan completed 2010
  • Grant to help fund this project

• Energy savings 1.1 GWH ($80,000) per year
  • From 44 to 24 dryers
  • Project cost $580,000
  • Grant $285,855
  • First Energy Rebate $119,000
Process Dryers

Dryers Before

Dryers After
Air Compressor Change

- 125 HP Air Compressor went bad
  - Savings $17,465 / Year
  - Project cost $75,000
  - Grant $36,822
  - First Energy rebate $22,000
  - Variable speed drive used as Trim compressor
Electric Demand 10/08 – 7/13

Ravenna Electric Demand - Account #110010467204

- Plant lighting
- Process Dryer
- New Extrusion Line 11

37% Reduction in usage
Parflex – What is Next?

• Chilled water optimization
  • Estimated investment $120,000
  • Estimated Savings 750,000 kWh, $52,000 / year

• What is your next step?