

US EPA ARCHIVE DOCUMENT

PING, Inc's Energy Program

Hitting the Green in Regulation



PING, Inc.

- Manufacture golf clubs and accessories
- Privately owned
- Global presence
- Phoenix (Main)
 - 700 – 1000 employees
 - 40 acre, 20 building campus
 - ISO 9001 and 14001 certified
 - Lean manufacturing ~ 5 years

Energy Use

Significant Aspect

<u>Process Facility/Activity/Product/ Service</u> <u>May be grouped by process (e.g gripping / shafting / grinding / lighting / offices / buildings) and/or media (air, water, waste, etc).</u>	<u>Aspects</u>	<u>Affected Media (e.g. Air/Water/ Waste/Energy, etc.)</u> <u>Impacts</u>	<u>Legally Regulated non/low/Med/high</u>	<u>Controlled (yes/no)</u>	<u>Quantity (hi/med/low)</u>	<u>Probability of upset or release (hi/med/low)</u>	<u>Abnormal Conditions considered significant? Yes/ no</u>	<u>Part of current or group Objective/target? Yes/No</u>	<u>Positive Aspect or completed target</u>	<u>Significant Y/N/G(group)</u>
LOCATION: FACILITY WIDE CAMPUS										
	Electricity Usage - Group	Energy	M	Y	H	L	N	Y		Y
	Water Usage - Group	Water	M	Y	H	L	N	N	Y	N
	Air Pollution – Group	Air, legal, community	H	Y	M	M	Y	Y		Y
	Paper usage - Group	Waste	L	Y	H	L	N	Y		Y
	Product/Supply Packaging Cardboard Usage - Group	Waste	L	Y	H	M	N	Y		Y
	Hazardous Waste - Group	Waste, legal, community	H	Y	M	L	Y	Y		Y
	Volatile, flammable liquids, and other materials – Group (See Hazardous Material Inventory Statement)	Fire and Air Pollution/Solid Wastes (grouped in various units)	H	Y	L	L	Y	N		N
	Community Outreach – Presentations	Improved ISO/EMS awareness	N	N	L	L	N	Y	Y	N
	EPA Performance Track	Improved EMS – National Recognition	N	Y	L	L	N	Y	Y	N
	Fluorescent Bulbs	Waste - greenlights	H	Y	L	L	N	Y	Y	N
	Employee Commuting	Air, Energy	L	Y	M	L	N	N		N
	E-Wastes	Waste	M	Y	L	L	N	N		N
	AESA member and ADEQ Performance Track Member	Reduction in energy, waste, air pollution	N	Y	H	L	N	Y	Y	Y

Energy Use Significant Aspect



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Energy Use Significant Aspect



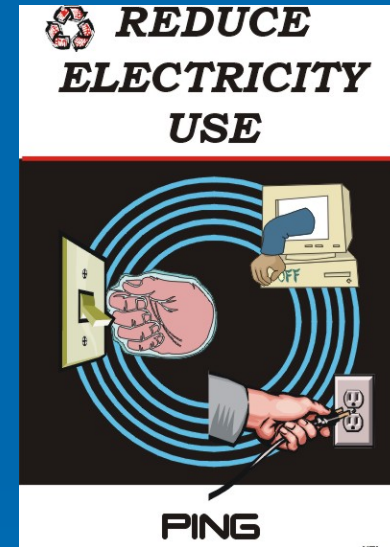
Energy Use Significant Aspect



Energy Use Objective

➤ Reduce Electrical Use

- Broad approach
- Company wide effort
- Communication
 - ❑ Bulletin boards
 - ❑ Internal web page



Energy Use

2000 – 2004 Programs

- Start value: 11.4 mkWh (1999)
- Goal: 10.5 mkWh (post campus re-design)
- Measure: Monthly electrical bills
- Normalize: Total club production

Energy Use

2000 – 2004 Programs

- APS Corporate Conservation Challenge
 - Set thermostats higher
 - Reduce load demand in afternoons



Energy Use

2000 – 2004 Programs

➤ Building Re-design

- Lighting
- HVAC
- Wall insulation
- \$40,500 annual savings

➤ 2004 – 10.8 mkWh



Energy Use

2005 - 2007

- 2005 Performance Track Application
 - Commitment: Reduce Total Energy Use
 - Electricity, Natural Gas, Diesel Fuel
 - 2004 Baseline: 90, 456 MMBtu (total)
 - 2007 Goal: 88, 526 MMBtu (total)
 - Normalized: total club production

- ~ 3 – 4 percent reduction

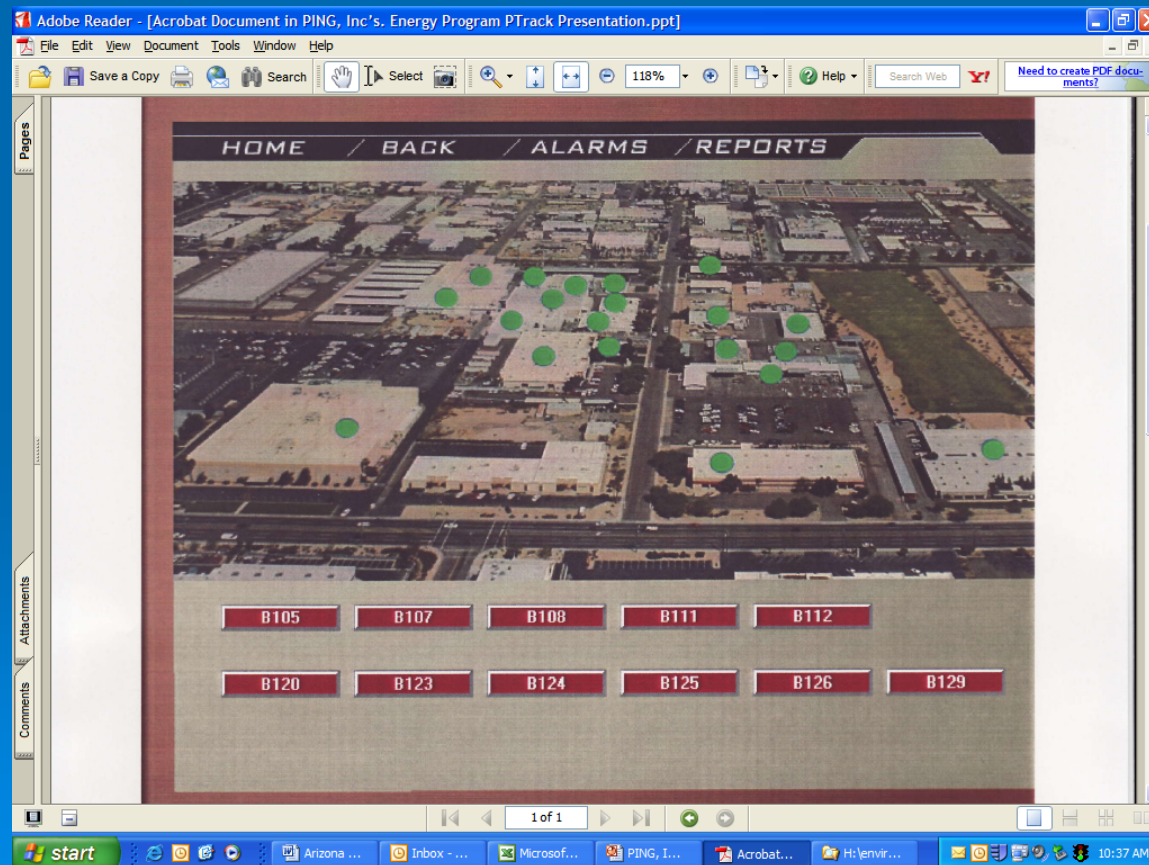
Energy Use 2005 - 2007

- Install variable-speed air compressor



Energy Use 2005 - 2007

➤ HVAC system automation



Energy Use 2005 - 2007

- Install cycling air dryers
- Replace 4 injection mold machines with 2
- Replace 400 HID fixtures with T5 fixtures



Energy Use 2005 - 2007

- 2007 Performance Track APR
 - Commitment: Reduce Total Energy Use
 - 2007 Goal: 88, 526 MMBtu (total)
 - 2007 Total: 73,423 MMBtu
 - 2007 Normalized: 67, 984 MMBtu
- ~ 20% total reduction
- ~ 25% normalized reduction

Energy Use 2008

- 2008 Performance Track Application
 - Challenge Commitment:
 - Reduce Total and Normalized Energy Use by 10%
 - 2007 Baseline: 73, 423 MMBtu (total)
 - 2010 Goal: 66, 075 MMBtu (total)
 - Normalized: total club production

Energy Use 2008

- Replace 419 light fixtures
 - 294 watts/fixture → 108 watts/fixture
 - 313, 747 kWh annual savings



Energy Use 2008

- Reduced boiler set point to 110 °F
- Remove gas-heated curing areas
- Reduced number of gas-heaters by 50%
- Revised HVAC schedule
- Increased chiller set point

Energy Use 2008

➤ 4-10 work schedule

- Met production needs with flexible schedule
- Energy-consuming equipment
 - Injection Molding Dept
 - Grinding/Blasting Dept



Energy Use 2008

➤ Energy-Conservation Communication

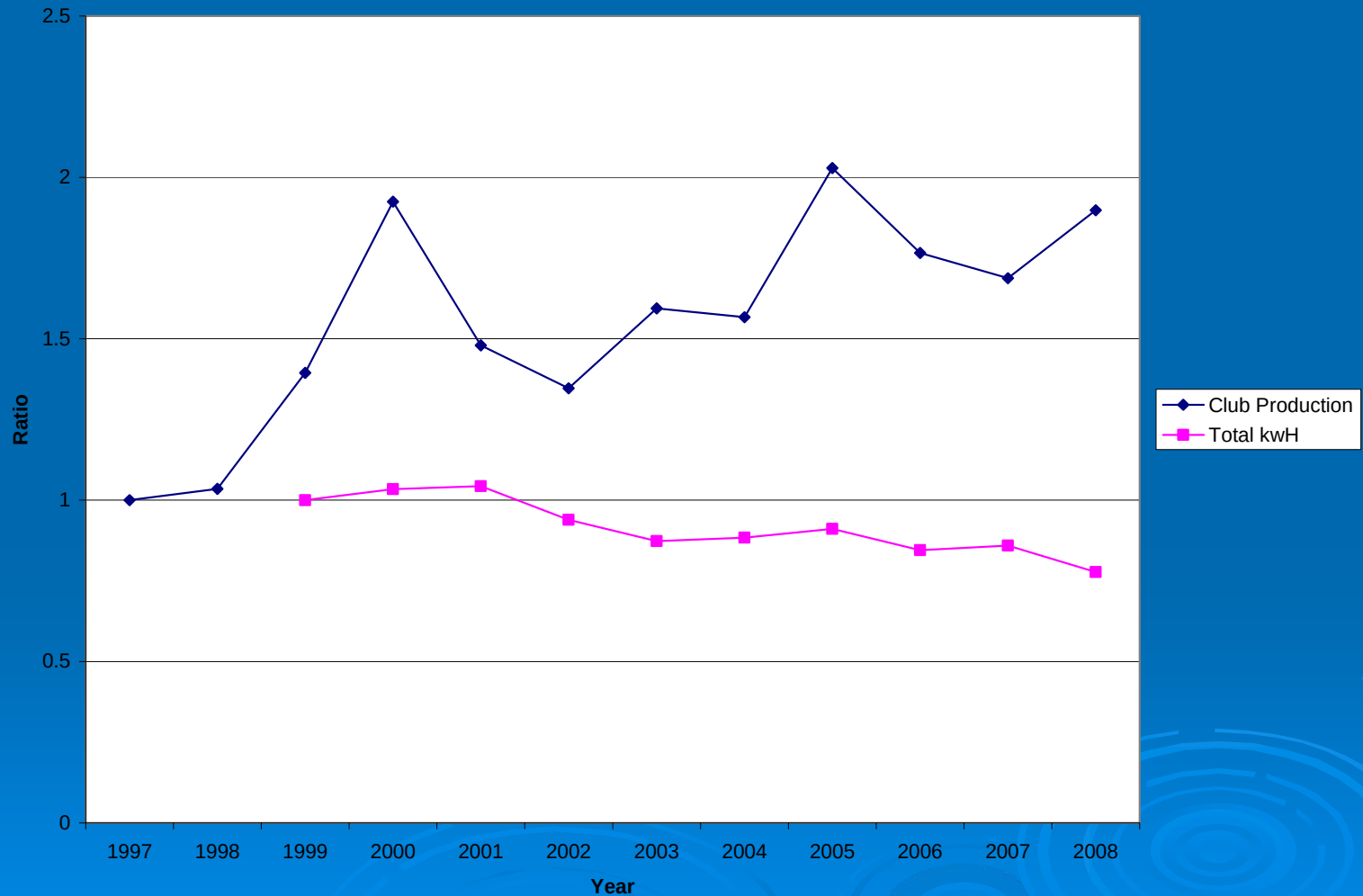
- Maintain set points at 76 °F
- Turn off lights
- Turn off idling equipment
- Report compressed air leaks



Energy Use 2008

- 2008 Performance Track APR
 - Challenge Commitment:
 - Reduce Total and Normalized Energy Use by 10%
 - 2010 Goal: 66, 075 MMBtu (total)
 - 2008 Total: 65, 078 MMBtu
 - 2008 Normalized: 57, 591 MMBtu
- ~ 12% total reduction
- ~ 22% normalized reduction

Energy Use 1997 - 2008



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