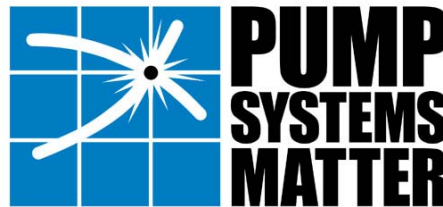


*Pump Systems Matter
Energy Summit*

***Marketing Industrial Energy Efficiency:
Learning from Success Stories
& Energy Champions in Industry***

**Christopher Russell
Alliance to Save Energy**



Energy | Efficiency | Economics

Christopher Russell, C.E.M.

- **Director, Industry Sector**
- **With Alliance since 1999**
- **Energy industry since 1992**
- **MBA, but not an engineer...**
- **Translate tech into business-speak**
- **Facilitate the market for energy efficiency**

What is the Alliance?

- **Promote the efficient and clean use of energy worldwide to benefit the environment, economy, and national security.**
- **Policy, education, research, technology deployment, market transformation and communication initiatives.**
- **Strong bi-partisan congressional, corporate & public interest leadership.**



Outline

- **A Basic Question about Energy Efficiency**
- **Five Cases**
- **Lessons Learned**

Basic Question

**Some facility managers
embrace energy efficiency...**

Some don't.

Why?

CORPORATE ENERGY MANAGEMENT CASE STUDIES

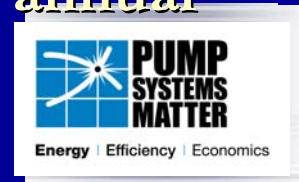
Five examples to learn from:

- **DuPont**
- **Frito-Lay**
- **Kimberly-Clark**
- **Mercury Marine**
- **Unilever HPC**

DuPont

John Kane, Jr.

- **Motivation**
 - Need to handle volatility in energy markets
 - Consolidating/replicating improvement knowledge
 - Environmental compliance
- **Strategy: Economic Optimization with Six Sigma**
- **Results (1990 base, thru 2003)**
 - 68% reduction in GHG emissions
 - Global energy consumption held flat, despite 35% increase in production
 - 75 six sigma projects in database, average annual savings of \$250,000 per project



Frito-Lay

Rob Schasel

- **Motivation**
 - Handling volatility of energy markets
 - Disenchantment with ESCO services
- **Strategy: In-house benchmarking discipline**
- **Results (1999 base thru 2002)**
 - 21% reduction in water
 - 11% reduction in fuels
 - 12% reduction in electricity

Continental Tire - Jim Boczek

MPC Energy – Mike Pappas

- **Motivation**
 - Plant closures, intra-corporate competition
 - Opportunity to reduce cost, boost productivity
- **Strategy: Partner with ESCO**
- **Results**
 - Reduced energy cost per tire 21% in partnership with ESCO
 - Self-sustained energy management saved an additional 20%

Mercury Marine

Jerry Eaton

- **Motivation**
 - Dealing with energy market volatility
 - Consolidate/replicate improvement knowledge
- **Strategy: accurate power metering & cost accounting**
- **Results**
 - CA system saves 9-10MM kWh annually
 - CA heat recovery offsets \$50k space heat
 - Lighting retrofits: 4.2MM kWh annually
 - Roof-top heating units, elec to gas, 2.7 kWh/yr

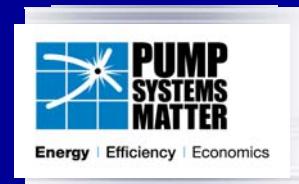
Unilever HPC

Jim Pease

- **Motivation**
 - Dealing with energy market volatility and complexity
 - **Strategy: Behavior modification. No capital.**
- **Results (2000 base thru 2003)**
 - Energy consumption reduced 16%
 - \$4.25MM savings

Universal Similarities

- Ongoing tasks: budget, measure, verify
- Linked to ops/financial performance
- Roles, goals, & accountabilities
- Average: 10-20 percent energy cost savings
- Cost to manage = 1-2% of energy spend
(capital investment not included)
- Coordination thru an Energy Champion
Management without vision is chaos
- Top-level support:
Vision without commitment is DOA



Barriers to Action

- Uncertain business/investment climate
- Organizational design and complexity
 - Dept. A pays, Dept. B books the savings
 - Confines of org chart, job descriptions
 - Early 20th century accounting techniques
- Semantics, lack of awareness & accountability
- Fear and denial
- Delegation **ONLY** to engineer maintenance staff
 - No business connectivity: operations, finance, procurement

Managing Energy Consumption: Five Prevailing Industrial Strategies

- 4%: DO NOTHING
- 5%: PRICE-SHOP FOR FUEL
- 25%: OPEX PROJECTS
- 37%: CAPEX PROJECTS
- 27%: SUSTAINED MANAGEMENT PLAN

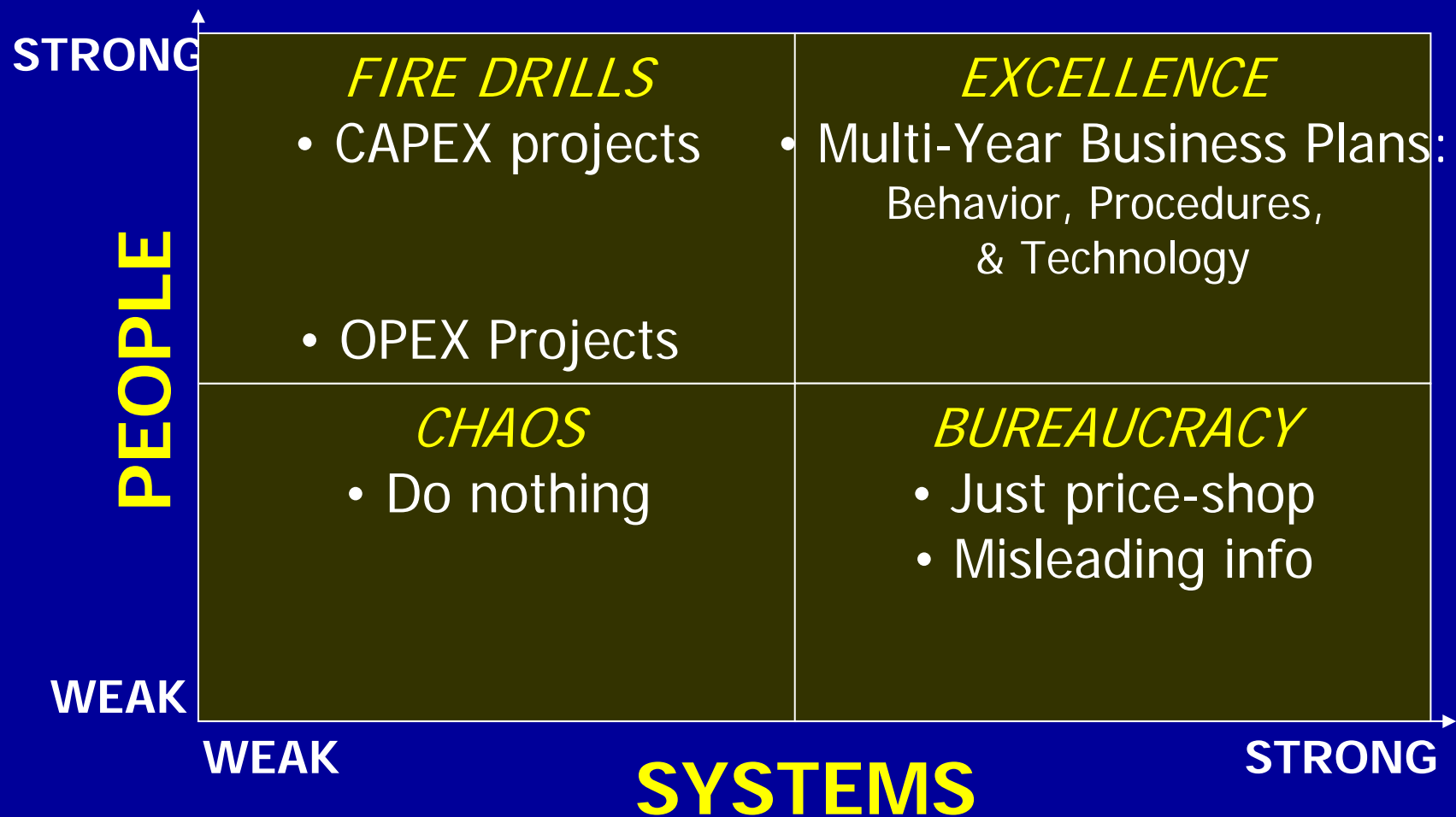
Survey of 100 large consumers, Nov '05

Energy Management: What Does it Take?

- **STRONG PEOPLE**
 - Technical skills: engineering, info systems
 - Collaborative, can-do ethic
 - Ability to communicate in business terms
- **STRONG SYSTEMS**
 - Multi-year planning discipline
 - Goals, accountabilities
 - Performance metrics
 - Cross-departmental coordination (fiscal, planning)

Organizational Features

Determine Energy Mgmt. Strategy



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Thank You

Ask about the
“60-Second Energy Manager” Series

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