

ALABAMA SUMMIT ON INDUSTRIAL ENERGY EFFICIENCY



**Olin Corporation – Large
Industrial Energy Efficiency**

Olin Corporation

Three Divisions – Chlor Alkali, Distribution, Winchester

- 2012 Revenue - \$2.2 B
 - Chlor Alkali Division \$1.4 B

Chlor Alkali

- Produce Chlorine, Caustic Soda and Bleach
- Primary markets served – Basic Metals, Pulp and Paper, Chemical Industry, and Water Treatment
- Alabama – Largest Chlor Alkali facility in fleet – McIntosh
 - Very large energy consumer

McIntosh Site



Brief History of Industrial EE

1930s – 1970s

- Focus on large energy consuming processes
- Self generation when no reliable 3rd party supplier
- Government regulation primarily price and supply controls

1970s – 1990s

- Oil shocks – energy costs become more critical – still primarily focused on large consuming processes
- Make vs buy energy becomes strategic decision
- Beginnings of market deregulation
- Governments get into business of energy efficiency (Jimmy Carter fireside chat – 1977)

• 1990s – now

- Industrial strategic focus on energy – for some an on again/off again proposition while others take systemic and sustained approach
- New drivers – Environmental regulations, rapid advancement in technology due to new processor capabilities, some utilities recognize that growth for growth's sake not sustainable, energy deregulation takes hold
- Governments continue regulatory and legislative push but also look for ways to facilitate EE improvements (DOE, EPA Energy Star, state initiatives)

The Sustained Approach to EE – Key Elements

1. Top Management Engagement
 - Included in top level Key Performance Indicators (KPIs)
2. Corporate Effort
 - Guided by Energy Policy
 - Engagement at all levels
3. Utilize Industry accepted energy management standards,
 - MSE 2000-2008, ISO 50001
4. Process focused
 - Consider all processes, not just large energy consuming areas
 - Continuous Improvement is a key consideration
5. Utilization of all available resources
 - Internal and external – external includes technical assistance and funding

The Sustained Approach – Major Barriers

1. Competition for capital
 - Capacity expansion vs EE improvement
2. Energy cost volatility
 - \$3 natural gas vs \$13 natural gas
3. Work force demographics
 - Accelerating loss of experienced workforce – knowledge drain
4. Technology Risk
 - Investing in technology that could be obsolete tomorrow – creates decision paralysis
5. Regulatory Uncertainty
 - Market (e.g. deregulation)
 - Environmental

The Sustained Approach – Removing Barriers

1. Competition for capital – Industry/Government
 - Low cost loan programs (typically work for small industrials)
2. Energy cost volatility – Industry/Government
 - Hedging; resource investment, technology upgrades, some government oversight (e.g. FERC)
3. Work force demographics – Industry/Government
 - Training programs; training incentives
4. Technology Risk – Industry
 - industry must assess as part of investment strategy – apply risk management tools
5. Regulatory Uncertainty – Government/Industry
 - Government and industry partner in development
 - Market (e.g. deregulation)
 - Environmental

The Sustained Approach – Funding

NOT THROUGH UTILITY RATES!

1. Inefficient – how much is needed? Program criteria often doesn't fit with industry investment criteria
2. Regressive – consumers with higher energy content carry burden, smaller companies often not capable of meeting program requirements
3. Politics lead to socialization of funding – industrial sector subsidizes residential and commercial sectors
4. If compelled to include industrials allow for opt-out

THEN HOW?

1. Industry – primarily self funded with some assistance through economic development and low cost loan programs
2. Government programs (e.g. training) – through normal revenue collection channels

Thank You