

March 2007



**PepsiCo**

***Corporate Energy Management***

# Carbon Reduction Goals



*Frito-Lay has set a goal of reducing its GHG emissions by 14 percent per pound of product from 2002 to 2010.*

- In 1999, Frito-Lay joined EPA's Climate Wise program
- Frito-Lay reduced GHG emissions by 9.4 percent per pound of product between 1999 and 2002
- Frito-Lay joined Climate Leaders in 2004
- 14% Reduction Goal is Based Upon
  - Projections of Future Improvements in Energy Efficiency
  - Plus a Stretch Factor
- From 2002 to 2005, Frito-Lay Has Reduced its Emissions by 7.2 % per Pound of Product

# Goals and Motivation



- Carbon Reduction Goals
  - Absolutely The Right Thing To Do
  - Hard to “Touch”
  - Difficult to Compensate for Goal Achievement
- Energy Savings Goals
  - Directly Tied to Carbon Reduction
  - Easier to Measure on a Daily Basis
- Dollar Productivity Goals
  - Aligned with Energy Saving and Carbon Reduction Goals
  - Aligned with your Corporate Strategy
  - Can Be Directly Tied to Compensation

# Three Phases of Cost Control



- Procurement & Risk Management
  - Leverage PepsiCo Scale
    - Combined Contracts
    - Use Small Team of Experts For Multiple Divisions
  - Uniform Volatility Management
    - “Standard” Cost Process For Sites
    - Single Market Benchmark for Risk Control
- Conservation
  - Field Based Team of Volunteers
  - Coordinated Through Regional Captains
  - Peer – To – Peer Assistance Network
- Technological Innovation
  - Re-Applying Externally Developed Ideas Where Practical
  - Internally Developing Process Changes To Drive Productivity

# Achieving Productivity



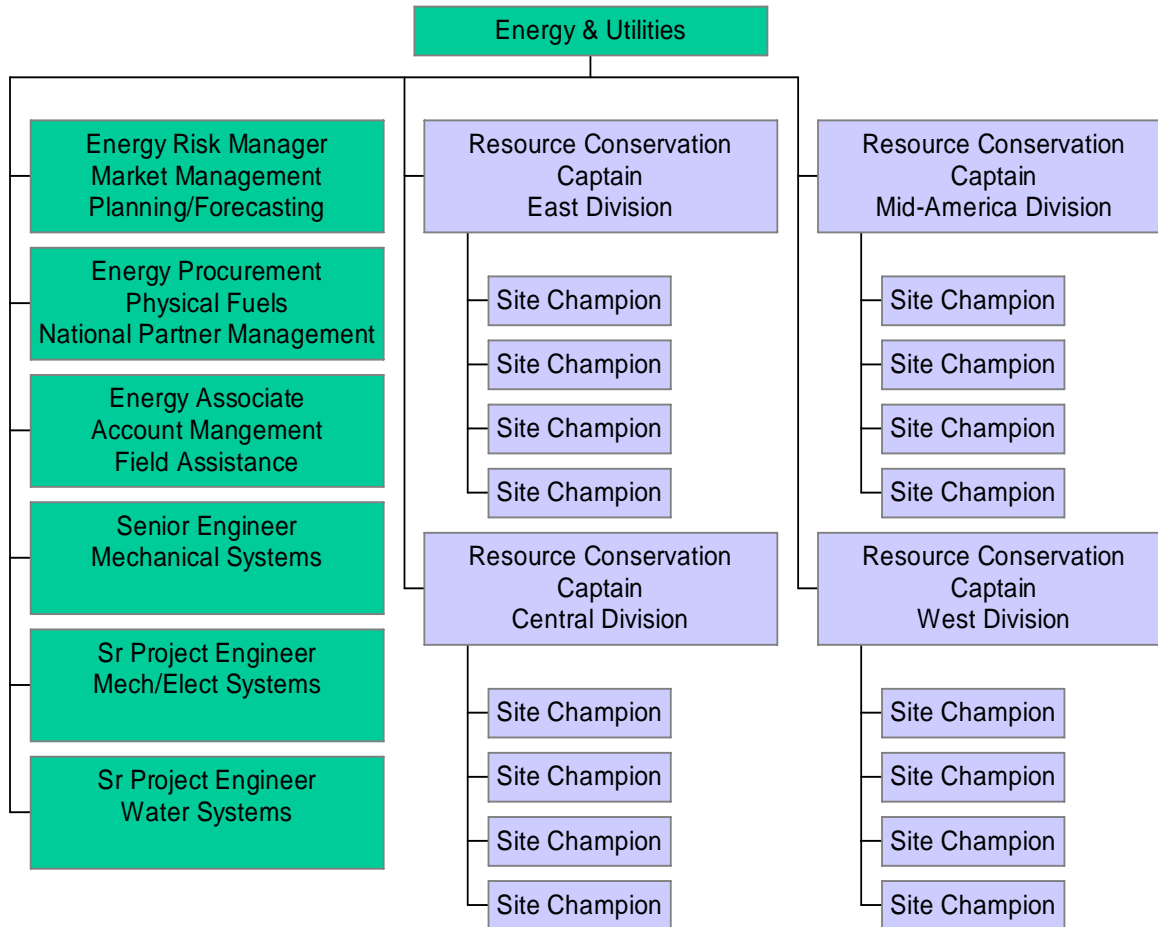
*Requires Process, Strategy, Execution & Endless Determination*

- Set A Big Challenge
  - Little Goals Produce Little Results
- Create A Team
  - Every Site Needs Experts With Enthusiasm
- Budget
  - We're All Driven By The Numbers
- Scorecard
  - The Budget Won't Show The Opportunities
- Audit
  - Demand Success & Help To Achieve It
- Innovate
  - You Know Your Own Business Best
- Execute
  - The Best Laid Plans ... Are Still Just Plans
- Communicate Results
  - Share The Stories & Rewards Of Success

# Team Development

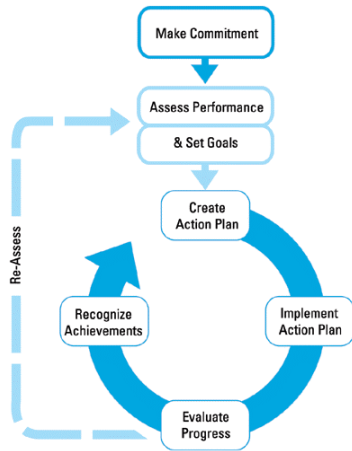


Core Corporate Support For Operations Execution Team



- Corporate Support
  - Procurement
  - Risk Management
  - Engineering
  - Project Development
- Operations Team
  - Collateral Responsibility
  - Execution Imperative

# Team With Energy Star



Program Model

ENERGY STAR® Energy Management Assessment Matrix			
	Little or no evidence	Some evidence	Fully implemented
<b>High Commitment to Performance Improvement</b>			
Energy Director	<a href="#">http://www.energystar.gov/energy-director</a>	<a href="#">http://www.energystar.gov/energy-director</a>	<a href="#">http://www.energystar.gov/energy-director</a>
Energy Team	<a href="#">http://www.energystar.gov/energy-team</a>	<a href="#">http://www.energystar.gov/energy-team</a>	<a href="#">http://www.energystar.gov/energy-team</a>
Energy Policy	<a href="#">http://www.energystar.gov/energy-policy</a>	<a href="#">http://www.energystar.gov/energy-policy</a>	<a href="#">http://www.energystar.gov/energy-policy</a>
<b>Energy Performance and Operations</b>			
Collect and Track Data	<a href="#">http://www.energystar.gov/collect-and-track-data</a>	<a href="#">http://www.energystar.gov/collect-and-track-data</a>	<a href="#">http://www.energystar.gov/collect-and-track-data</a>
Normalize	<a href="#">http://www.energystar.gov/normalize</a>	<a href="#">http://www.energystar.gov/normalize</a>	<a href="#">http://www.energystar.gov/normalize</a>
Establish baselines	<a href="#">http://www.energystar.gov/establish-baselines</a>	<a href="#">http://www.energystar.gov/establish-baselines</a>	<a href="#">http://www.energystar.gov/establish-baselines</a>
Benchmark	<a href="#">http://www.energystar.gov/benchmark</a>	<a href="#">http://www.energystar.gov/benchmark</a>	<a href="#">http://www.energystar.gov/benchmark</a>
Analysis	<a href="#">http://www.energystar.gov/analysis</a>	<a href="#">http://www.energystar.gov/analysis</a>	<a href="#">http://www.energystar.gov/analysis</a>
Technical assessments and audits	<a href="#">http://www.energystar.gov/technical-assessments-and-audits</a>	<a href="#">http://www.energystar.gov/technical-assessments-and-audits</a>	<a href="#">http://www.energystar.gov/technical-assessments-and-audits</a>
<b>Energy Conservation</b>			
Determine scope	<a href="#">http://www.energystar.gov/determine-scope</a>	<a href="#">http://www.energystar.gov/determine-scope</a>	<a href="#">http://www.energystar.gov/determine-scope</a>
Estimate potential for improvement	<a href="#">http://www.energystar.gov/estimate-potential-for-improvement</a>	<a href="#">http://www.energystar.gov/estimate-potential-for-improvement</a>	<a href="#">http://www.energystar.gov/estimate-potential-for-improvement</a>
Establish goals	<a href="#">http://www.energystar.gov/establish-goals</a>	<a href="#">http://www.energystar.gov/establish-goals</a>	<a href="#">http://www.energystar.gov/establish-goals</a>
Define technical scope and targets	<a href="#">http://www.energystar.gov/define-technical-scope-and-targets</a>	<a href="#">http://www.energystar.gov/define-technical-scope-and-targets</a>	<a href="#">http://www.energystar.gov/define-technical-scope-and-targets</a>
Determine roles and resources	<a href="#">http://www.energystar.gov/determine-roles-and-resources</a>	<a href="#">http://www.energystar.gov/determine-roles-and-resources</a>	<a href="#">http://www.energystar.gov/determine-roles-and-resources</a>
<b>Energy Conservation Program</b>			
Create a communication plan	<a href="#">http://www.energystar.gov/create-a-communication-plan</a>	<a href="#">http://www.energystar.gov/create-a-communication-plan</a>	<a href="#">http://www.energystar.gov/create-a-communication-plan</a>
Pilot measures	<a href="#">http://www.energystar.gov/pilot-measures</a>	<a href="#">http://www.energystar.gov/pilot-measures</a>	<a href="#">http://www.energystar.gov/pilot-measures</a>
Build capacity	<a href="#">http://www.energystar.gov/build-capacity</a>	<a href="#">http://www.energystar.gov/build-capacity</a>	<a href="#">http://www.energystar.gov/build-capacity</a>
Motivate	<a href="#">http://www.energystar.gov/motivate</a>	<a href="#">http://www.energystar.gov/motivate</a>	<a href="#">http://www.energystar.gov/motivate</a>
Track and monitor	<a href="#">http://www.energystar.gov/track-and-monitor</a>	<a href="#">http://www.energystar.gov/track-and-monitor</a>	<a href="#">http://www.energystar.gov/track-and-monitor</a>
Measure results	<a href="#">http://www.energystar.gov/measure-results</a>	<a href="#">http://www.energystar.gov/measure-results</a>	<a href="#">http://www.energystar.gov/measure-results</a>
Revise action plan	<a href="#">http://www.energystar.gov/revise-action-plan</a>	<a href="#">http://www.energystar.gov/revise-action-plan</a>	<a href="#">http://www.energystar.gov/revise-action-plan</a>

Self-Assessment Matrix



Networking Opportunities



Employee Motivation

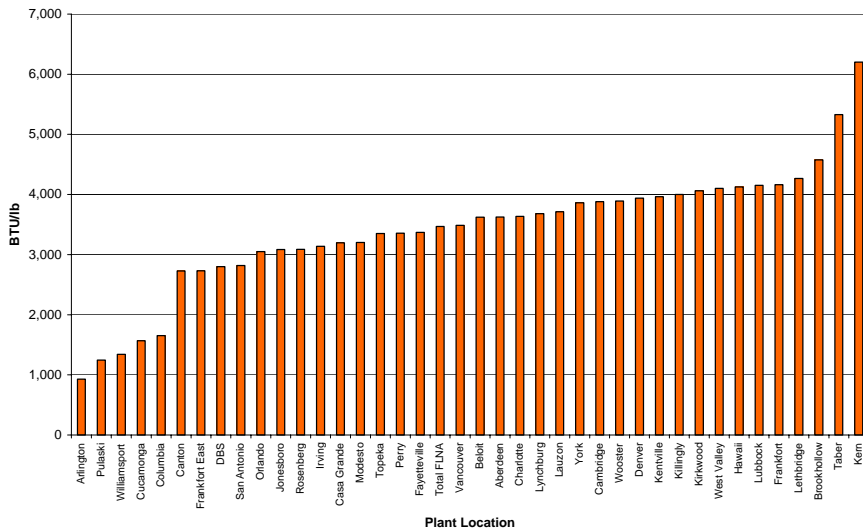


National Recognition

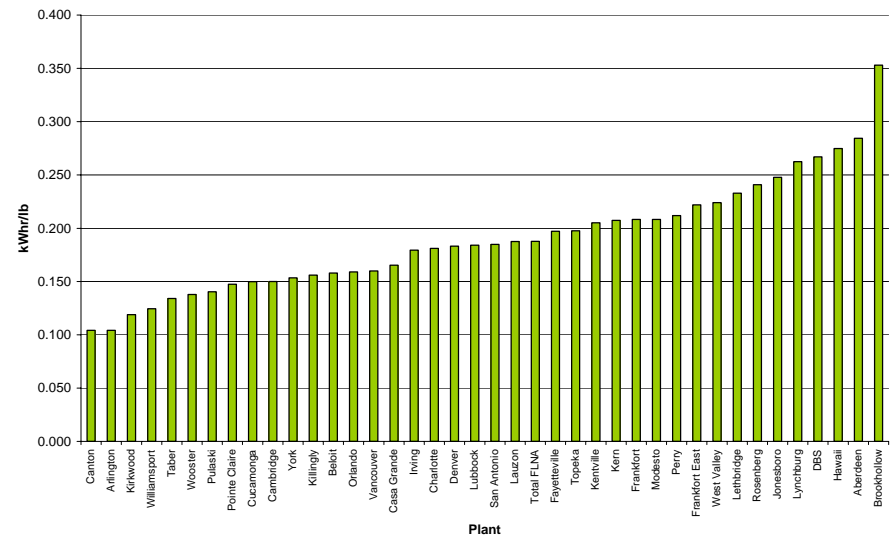
# Benchmarking Plants



BTU/lb Ranking by Plant



kWhr/lb Ranking by Plant



- Each Site Records Energy and Water Use Each Week
- Normalizes Use to Production Data
- Submits Scorecard to Resource Conservation Server
- Allows National Tracking and Benchmarking
- Operational Differences Between Plants Still Make Direct Comparisons Difficult



# Scorecard



In Use Throughout PepsiCo - Globally



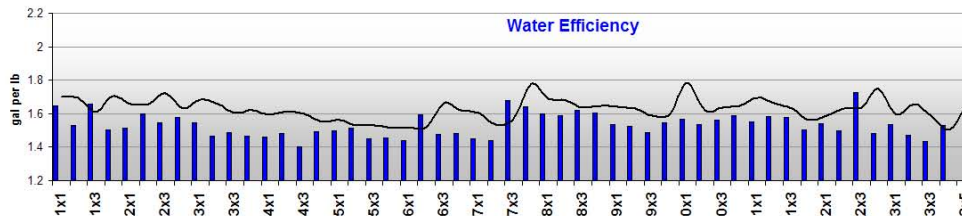
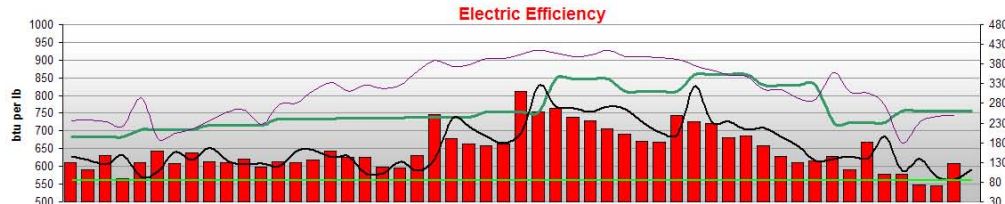
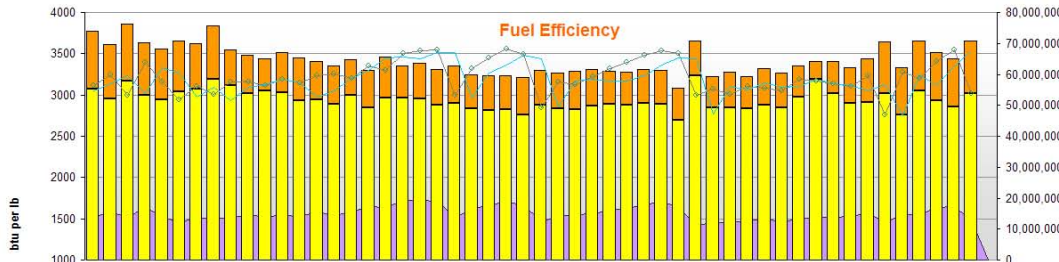
## 2006 FL North America Resource Conservation Score Card



Period	1	2	3	4	5	6	7	8	9	10	11	12	13
Nat Gas BTU/#	3,044	3,060	3,051	2,940	2,932	2,853	2,818	2,867	2,913	2,851	3,008	2,888	2,957
Other Fuel BTU/#	670	605	444	469	444	430	431	422	407	410	350	538	600
Total Fuel BTU/#	3,713	3,665	3,496	3,410	3,376	3,283	3,249	3,289	3,320	3,261	3,358	3,427	3,557
Electricity BTU/#	597	624	609	621	611	676	713	734	692	703	628	612	568
Water GAL/#	1.58	1.56	1.49	1.46	1.48	1.49	1.54	1.60	1.52	1.56	1.55	1.55	1.49
Sewer	0.80	0.80	0.74	0.74	0.75	0.74	0.78	0.79	0.75	0.77	0.74	0.74	0.72
Nitrogen	0.96	0.92	0.96	0.97	0.82	0.87	0.88	0.88	0.85	0.96	0.91	0.93	0.86
Pounds/Period	233,451,253	218,753,940	230,294,411	235,668,118	258,312,676	248,192,790	241,278,126	241,748,587	253,770,951	220,104,129	#####	223,026,848	#####

YTD	YAG Index	Plan	PTD 13 VAR	YTD PLAN VAR
2,936	89.03%	92.44%	\$0	\$0
478	189.96%	71.12%	(\$1)	\$0
3,413	96.17%			\$0
646	98.18%	115.97%	\$0	\$0
1.53	94.30%	0.13%	\$0	\$0
0.76	87.47%	0.31%	(\$706,322)	\$0
0.90	87.53%	Total	(\$706,323)	\$0
3,076,967,492	101.26%	105.02%	97%	95%

Gas Other Fuels Elec Water Plan BHAG YAG LBS PCLBS



Foundational No Debates	
Crossfunctional RC Team Aligned With Site's Green Team	G
RC Champion, RC Team and Site Have Training Plans and DAPs	G
Site's RC Team is Engaged in Region and National Activities	G



Tactical No Debates	
Maintain and Act on Weekly RC Scorecard Results	G
Track Performance Daily and Hold Plant Specific "Utility Walls"	G
Complete Opportunity Audits and Act On Recommendations	G

Period 13					
Week	1	2	3	4	Plan
Natural Gas	3,049	2,927	2,858	3,017	3,134
Other Fuel	600	588	585	633	183
Total Fuel	3,650	3,515	3,444	3,651	3,317
Electricity	578	547	545	609	757
Water	1.53	1.47	1.43	1.53	0.00
Sewer	0.75	0.71	0.71	0.72	0.00
Nitrogen	0.85	0.89	0.81	0.89	1.50
Pounds	58,670,889	64,198,291	67,822,503	53,743,762	244,435,445

# Site Opportunity Audits



*Sharing Best Practices And Finding New Ones*

<u>Opportunity</u>	<u>Section</u>	<u>Score</u>
\$0	Administrative	89%
\$12,000	Awareness & Accountability	62%
\$75,000	Electrical	76%
\$0	Alternate Fuels	93%
\$65,000	Boiler / Steam / Condensate Systems	83%
\$15,000	Nitrogen System	80%
\$25,000	Process Combustion	65%
\$25,000	Water and Sewer Systems	86%
<i>\$217,000</i>	<i>Total Site Score</i>	<i>79%</i>

- Each Site - Each Year
  - Ensure Project Ideas Are Implemented
  - Document Performance Trend
- Audit Team Composition
  - Division Resource Conservation Captain
  - Corporate Support
  - Alternate Site Champions

# Capital Projects



Photovoltaics



DayLighting



Green DC

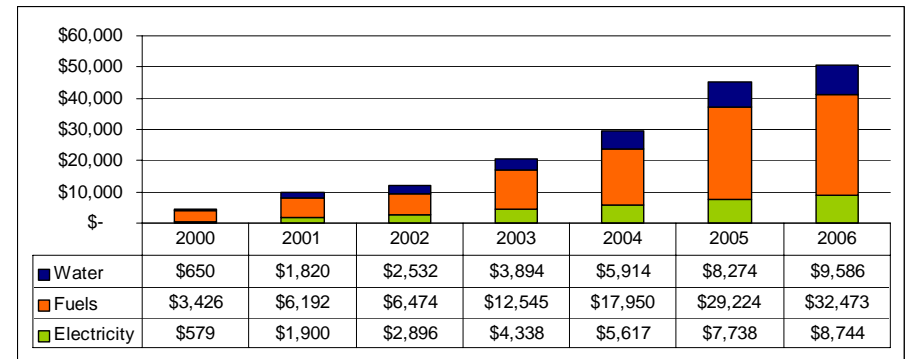
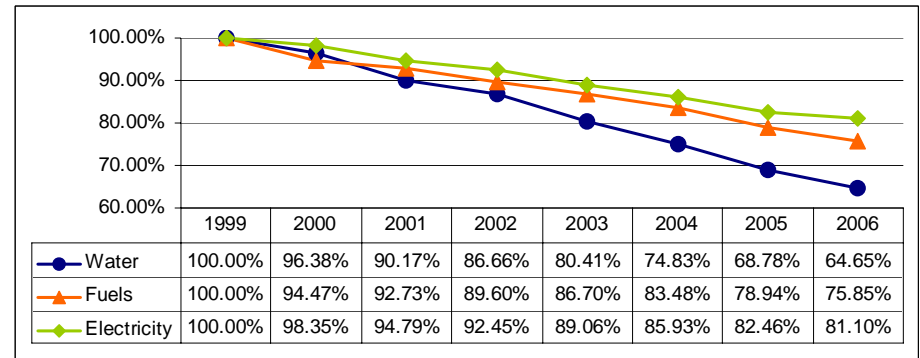
- Reduced Hurdle Rates
  - Less Execution Risk
  - Greater Lifecycle
  - Reliability Improvement
- Dedicated Capital
  - Demonstrates Commitment
  - Improves Profitability
  - Creates Excitement

# Communication



## *Up, Down & Across The Organization*

- Executive Communication
  - Annual Planning Process
  - Quarterly Progress Updates
- Team Meetings
  - Period Conference Calls
  - Quarterly Tactical Sessions
  - Annual Energy Summit
- Rewards & Recognition
  - High Performing Sites
  - High Performing Individuals
  - High Performing Program



# Summary



- Align Your Goals
  - In Order To Be Sustainable You Must Be Profitable
  - Saving Energy Saves Money
  - Saving Energy Reduces Carbon Emissions
- Team With Energy Star
  - Excellent Resources and Contacts
- Develop A Comprehensive Program
  - Procurement / Risk Management
  - Conservation
  - Capital Projects
  - Communication



**Any Questions?**

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