



WHEN THE LOW HANGING FRUIT HAS BEEN PICKED...

Strategic Energy Management Proves Fruitful

SoCalGas Company

SoCalGas has 21.4 million customers served through 5.9 million meters

These customers use over 8.7 billion therms of gas annually



Our service territory encompasses approximately 20,000 square miles and extends south to the Mexican border.

SoCalGas Coml, Indl, & Ag. Customers

2,036 Agricultural Customers



17,700 Industrial Customers

172,500 Commercial Customers



Energy Efficiency Program Drivers

**Meet
Energy
Efficiency
Goals**

**Reduce
Green
House
Gases &
Enhance
State's
Energy
Resource
Mgmt.**

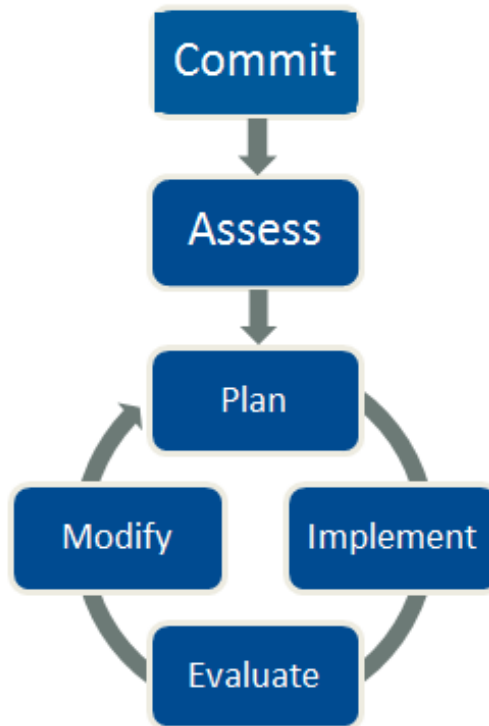
**Help
Customers
Improve
Their
Bottom
Line**

What Happened to the Low-Hanging Fruit?



- Saturation
- Regulation
- Legislation

Key Elements of Strategic Energy Management



A holistic approach (Gas, Electric, Water, Environment) to managing energy use to continuously improve energy performance and sustain energy and cost savings over the long term.

Reaching for the High-Hanging Fruit thru Strategic Energy Management (SEM)



- Continuous Energy Improvement (CEI) Long-Term Customer Engagement Program
 - Activity-based EE Option
 - Includes:
 - Tech./Org. Assessment
 - Energy Awareness
 - EE Long-Term Planning
 - Capital, O&M, and Behavioral Measure Implementation
 - Tracking & Monitoring, Evaluating Progress

SEM Ladder to the High-Hanging Fruit



Persistence Monitoring = Continual Savings



M&V Plans = Measure O & M / Behavioral Savings

Project Tracking & Documentation = Utility Attribution

Capital, O&M, Behavioral Measures = Energy/\$ Savings

EE Behavioral Changes = Culture Transformation

Strategic Long-Term Energy Efficiency Plans = Utility influence

Management Commitment = Top-Down/Bottom-Up Engagement

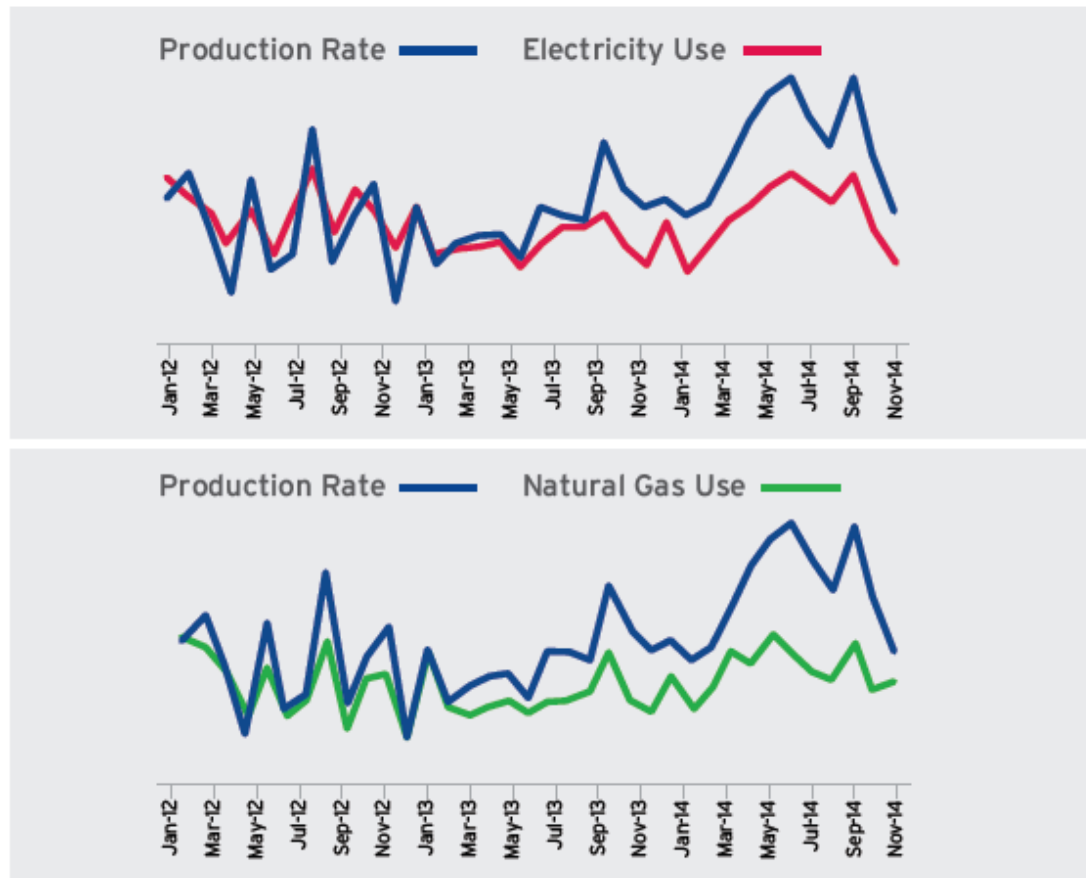
Case Study: Insulfoam Manufacturing

- » Insulfoam, Chino, CA
- » Manufacture expanded polystyrene foam blocks (EPS) using steam to expand and mold polystyrene beads.
- » Annual Energy Consumption:
 - 1,160,000 kWh/yr
 - 424 kW
 - 266,000 therms/yr
- » Drivers for participation in CEI:
 - Reduce operating costs. EPS market is highly competitive.
 - Corporate goal of 5% energy savings for 2014.



Insulfoam

5.7% Electricity Savings **5.2%** Natural Gas Savings



Insulfoam exceeded its energy reduction goal while increasing productivity.

Insulfoam Energy Savings Measures

» O&M and Behavior Measures:

- Implemented new operating procedures such as shutting off equipment when not needed (e.g. lunch breaks).
- Repaired leaks in steam lines to mold machines (April, 2014).
- Reset boiler pressure set points to reduce on/off cycling (Aug., 2014)

» Energy Efficiency Equipment Measures:

- Added Variable Speed Drive to cooling tower fan (Dec., 2014).
- Added Variable Speed Drive to cooling water pump (Dec., 2014).
- New expander (March, 2013) contributed to increased production beginning in latter half of 2013.

Industrial CEI Program Customer Testimonial



"The CEI program helped us achieve our 2014 energy savings goal.

The CEI program provided guidance and direction to make energy savings possible. CEI used a number of tools including on-site energy assessments, an energy dashboard to track energy use and a prioritized list of candidate savings projects. CEI strengthened our relationship with our utility account representatives and provided referrals to other utility energy efficiency programs for incentives."

– Leo Amancio, plant manager, Insulfoam

Case Study: Chino Valley Unified School District

- 36-site K-12 School District
- 2014-15: Intensive 12 month engagement
- 2015-16: On-going “light engagement” M&V



Chino Valley Unified School District

ENERGY SAVINGS AND ACHIEVEMENTS

3.5% Overall energy performance improvement

528,000 kWh
Annual energy savings from efficiency projects

21,500 Therms
Annual energy savings from efficiency projects

Commercial CEI Program Customer Testimonial



"(CEI) is a valuable resource for our district."

"Chino Valley USD has received guidance with implementing a more robust energy management culture. Our CEI advisor has offered a variety of energy management suggestions to help us focus on what needs to be done to manage the energy and resource usage throughout our District."

– Carla Kleinjan, sustainability coordinator
Chino Valley Unified School District

Next Steps

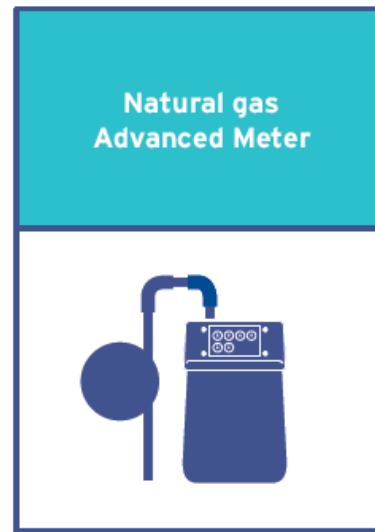


- 1** AB 802 – Incorporate normalized metered energy use into Program re-design
- 2** AB 802 - Embed M&V strategies into program re-design to track and verify as the program is implemented
- 3** AB 802 – Seek to expand AB 802 policies to include industrial SEM activities
- 4** Integrate software analytics to drive targeted improvements
- 5** Design a Pay-for-Performance incentive mechanism to encourage persistent O&M and behavior change
- 6** Cost effectively offer SEM/CEI to more customers

Enabling Technology



Online access to hourly, daily and weekly gas usage



**There is Still EE Fruit to Harvest ...
However, It May Require a Little Higher Reach.**



Thank You!

Contact Information:

Glenda Towns
Program Manager
213-244-3659
GTowns@semprautilities.com