


CALIFORNIA ENERGY EFFICIENCY STRATEGIC PLANNING	INDUSTRIAL	
Last Revised: 12/3/07	<i>Meeting Minutes</i>	Created By: Brian Liu & Joanne Medvitz

Meeting Name	Industrial Energy Efficiency Strategic Planning Workshop		
Meeting Date	November 29, 2007		
Meeting Time	9:30AM – 12:00PM, PST		
Venue	San Ramon Valley Conference Center (Pacific Gas & Electric)	City	San Ramon
Attendees	See Attendee List		

Meeting Notes

1. Introduction Presentation (Convener)- see presentation for details
2. Presentation (Lockheed Martin)
 - a. Lockheed Martin (LM) is one of the top 20 purchasers of power in PG&E.
 - i. LM has significantly reduced kWh and has produced over a large amount of incentives.
 - b. There are several energy efficiency projects at LM which include:
 - i. variable speed fans on boilers,
 - ii. chiller optimization,
 - iii. better building controls,
 - iv. specifying LEED silver minimum for all buildings
 - c. Carbon footprint and global warming are major corporate concerns.
 - i. work within the facilities- when you have done everything cost effective, only then do you look at carbon offsets
 - ii. Relaxing “green projects” from 2 yr ROI to a maximum of 6 yr ROI; projects are considered and ranked corporate wide
 - iii. Don’t want to be the “last one in the race” for a reduced carbon footprint
 - d. LM has established a solid working relationship with PG&E.
 - i. In addition to ongoing demand response, LM has developed digital controls, enabling the dispatch of more loads.

- ii. The recent upgrade to VAV boxes has allowed economizers to run more efficiently, ultimately reducing energy use and dispatching more loads.
- e. The big goal is to become carbon neutral.
 - i. While LM will always use energy, the hope is to maximize efficiency, then look at renewables, then buy the offsets.
 - ii. Buying green power at 1.2 MW annually
- f. Questions.
 - i. What kinds of programs does Lockheed Martin have with respect to energy savings?
 - 1. One example is Energy Climate Change team. LM has increased the budget by more than 4 times for energy saving programs and extended the timeline of the project from 2 years to 6 years.
 - ii. How does allocation occur between different facilities? Are dollars allocated per location?
 - 1. Allocation is corporate-wide. Groups will vie for that money by submitting their projects and money is granted to the best projects.
 - iii. Are programs approached from a tiered level such that energy efficiency is more important than demand response?
 - 1. In Sunnyvale, LM has worked on energy efficiency since the 1980s.
 - 2. Demand response started in 2001 in an effort to establish corporate citizenship.
 - 3. Looking at opportunities to automatically shed 1-2 MW- not in conflict with their energy efficiency goals
 - iv. Is Lockheed Martin looking to achieve “Carbon Neutral Zero”?
 - 1. Yes, LM will incorporate renewables as much as possible in order to reduce energy, and then buy the offsets.
 - v. Does the cost of energy have anything to do with LM ability to compete worldwide?
 - 1. Energy is becoming increasingly expensive. In regards to the international market, •Cost of energy doesn’t really have an impact on their global competitiveness
- 3. What would participants like this plan to achieve?
 - a. Participant states the •state needs to make a commitment to deployment of Combined heat and power (CHP), including use of fuel cells. Increased efficiency and cleaner energy use will drive better use of heat.
 - b. Participant states the price of electricity has doubled since deregulation. The rising cost of energy is a serious issue for steel and cement. Participant is concerned that if power exceeds than \$0.05, the government will begin to run steel and cement plants.

- c. Participant states that the CPUC and others need to have a feedback mechanism so that the planning will remain aligned with markets and technology. There must be constant realignment with goals through continuous review and improvement.
- d. Audience states that regulatory intrusions and costs need to be diminished.
 - i. Try to address impacts beyond the state
 - ii. More regulatory certainty and less regulatory cost
- e. Participant states that theoretically, stopping all imports would more than offset the greenhouse gas that is produced domestically. Manufacturing needs to be brought back to California.

The four questions discussed are:

- 1. How can energy efficiency help CA industry be more competitive?**
 - 2. What would strengthen the value of energy efficiency to shareholders, customers, and employees?**
 - 3. How will regulation affect the value of energy efficiency? What is the effect of AB32?**
 - 4. What could you do to encourage energy efficiency in your supply chain?**
1. How can energy efficiency help make California industry more competitive?
 - a. Energy efficiency (EE) drives down the cost per unit and reduces energy intensity. It also holds down the energy costs so utilities do not need to build another plant.
 - b. EE provides a competitive advantage of being green by promoting good corporate citizenship and PR.
 - ii. There is a competitive advantage to being green for both the consumer and industry. People want to do business with those who are green-conscious because of the “Good Samaritan” factor.
 - a. Success stories can be shared with other plants and corporations to help spread energy efficiency nationally and globally.
 - i. California can be a model for other states. This can begin by ensuring that national companies are aware of California’s energy efficiency.
 - b. There is a need to give into large scale comprehensive projects at facilities that will yield large results.
 - i. It is often hard to leverage an EE project which has a payback of three years when typical acceptable payback is two years. For most companies, EE projects compete with every other project for capital.
 - ii. A company will typically look at the initial cost and ignore the continuous cost savings. When there is a fixed budget, a company won’t look at the payback period of an energy efficiency program. It will simply push EE into a future maintenance plan.

- iii. In a global environment concerned with EE, the goal must align with GHG reductions.
 - iv. The utility companies can possibly develop co-generation programs with incentives.
2. What would strengthen the value of energy efficiency to shareholders, customers, and employees?
- a. Shareholders want to see a green philosophy.
 - i. A certification program would show shareholders that a company has met criteria for energy efficiency.
 - ii. By being energy efficient, companies can provide transparency into the energy expended in the creation of each widget.
 - b. Employees want their company to go green.
 - i. Energy efficiency will also establish a better working environment and possibly increase their productivity.
 - ii. After corporations instill EE into their practices, employees will tell their family and friends about it.
 - iii. Participants also believe it will revitalize the employee lifestyle and increase productivity.
 - c. Companies can pass on benefits from energy efficiency to lower prices for customers.
 - d. Corporations can take a top down policy similar to Wal-Mart asking their distributors “What is your green strategy?”
3. How will regulation affect the value of energy efficiency? What is the effect of AB32?
- a. Regulations cannot become so stringent that businesses choose not to operate in California and move elsewhere.
 - i. It’s like the running of the bulls right now—the State agencies need to get together and deal with this holistically
 - b. AB32 should provide early action credit for early adopters.
 - i. Companies are holding off projects, fearing they’ll invest in something that will not comply with AB-32.
 - ii. A company should not lose out on an incentive and end up paying more once AB32 starts. If so, businesses could end up moving to other states.
 - c. Maintain regulatory flexibility
 - i. Establish what comes out of the tailpipe- not the mix of fuels- allow innovation
 - ii. To reduce the carbon footprint--set a statewide metric and the goals in some way that makes sense and is flexible

- iii. If we could spend \$50 billion around the world on GHG reduction we could accomplish more than just spending it in the state
 - iv. Promote tiered and integrated steps with incentives and carbon credits for energy efficiency, demand response, and alternative fuel.
 - v. If EE becomes mandated, a company could possibly lose out on a significant amount of incentives and credits.
 - vi. There needs to be a flexible and integrated approach to incentives, carbon credits and tax credits.
4. What could you do to encourage energy efficiency in your supply chain?
- a. Suppliers must be held accountable. The level of accountability must be defined for all entities through a certification process.
 - i. Develop a label with market recognition – needs to address carbon footprint
 - ii. Avoid greenwashing by having real performance requirements behind the label
 - iii. Define the scope of responsibility for earning a label—maybe add levels for greater performance
 - b. Expand the definition of energy efficiency beyond electricity and natural gas.
 - i. There is currently no standard for EE. There should be a federal standard that forces everyone to comply.
 - c. Educate planning committees, design architects, and contractors about energy efficiency standards for all new construction.
5. What are the barriers to ideas discussed?
- a. CHP needs to be encouraged
 - i. the cost of departed load needs to be reduced- needs to be fair
 - ii. risk assumptions need to be re-evaluated
 - iii. issues with emissions must be dealt with realistically to allow biomass
 - iv. PG&E spend \$ on energy efficiency for co-gen sites to allow facility to sell back to the grid
 - b. There is a lack of awareness of opportunity. With so much focus being placed on regulation, the scope of energy efficiency is lost. The CPUC and the CEC can't push out business.
 - i. There is currently a high cost of energy.
 - ii. As discussed at a recent marketing, education and outreach meeting, education must occur at the contractor level and at the CEO level.
 - iii. While integration of programs is essential, it is also important to take education from the bottom up.
 - c. Additional comments

- i. Companies should be rewarded for implementing EE into their corporate strategy more than those who simply implement one or two projects.
- ii. By placing more meters in facility, managers can have a greater awareness for area of improvement.
- iii. Companies need to reshape their internal behavior to bring out creative solutions. For example, Ford identifies how much energy goes into making a car.
- iv. Reexamine the definition of energy efficiency so as not to overlook any possibilities.

(end of AM session)