CALIFORNIA ENERGY EFFICIENCY STRATEGIC PLANNING	INDUSTRIAL SECTOR	
Last Revised: 12/5/07	*Meeting Minutes*	Created By: Joanne Medvitz

Meeting Name	Energy Resource Utilization-is this the big picture? (webcast)		
Meeting Date	December 5, 2007		
Meeting Time	9:30 AM – 11:00 AM PST		
Venue	Call-in and webinar	**City**	N/A
Attendees	*(see attendee list)*		

Meeting Notes

Convenor Presentation

1. This webcast today will focus on point #1 and #4d on the strawman, Vision 2020 (posted on CEE website)
    a. Point #1: California industry has undergone a culture change so that active management of energy is fully integrated into daily operational practices – it has become "business as usual"
    b. Point #4d: Energy program offerings to industry are comprehensive in scope (including energy efficiency, demand response, load management, energy storage, combined heat and power, distributed generation, renewables, and emerging technologies)
2. Project Level Energy Efficiency Metrics
    a. Current approach to energy efficiency metrics
    b. Industrial energy use varies with project and misaligned metrics does not reflect actual energy savings and reflects poorly from management perspective.
3. Energy Resource Utilization
    a. Broad/comprehensive approach is on target? Which agencies and organizations need to be involved? What metrics are involved?
4. General comments from the participants

    Summary Points

    - Many companies are starting to report GHG emissions- energy is part of that. Energy intensity (energy/unit of production) can be calculated or measured.
    - Could allow a company to add renewable resources onsite and continue to draw the same amount of power- perhaps even becoming less energy efficient over time
    - Opportunity to tap into onsite production of energy and it sell back to the grid to expand statewide capacity. Difficult for this type of project to meet IRR requirements- financial assistance is needed to get over this hurdle.

- The current program model work fairly well for small industries- how can they play in a new paradigm? Energy intensity is a less feasible approach for them.

a. Question from the audience regarding the duration between metrics measured and implementation time.
    i. How to measure long term return of energy efficiency projects?
    ii. Convener responds that 12/20 webcast deals with program issues and how to increase flexibility in programs to address this issue.
b. Participant states that program design issue also needs to address needs to different industries
c. Participant states that the goal needs to be finite and well-defined
    i. Balance alternative renewable energy and grid-derived resources so that the net energy consumption is more accurately assessed at the product level
    ii. Current models do not take into account the energy offset
d. Participant identifies barrier: technology is perfected and available but industry needs an investment option to reduce the benefits realization from 8-10 years (cost recuperation time frame for California industry) down to 2-3 years (international industry standard), so they can afford the initial capital expense.

5. Discussion Question 1: Is this the approach that should be used for a statewide program to promote greater energy efficiency in CA industry?
    a. Energy intensity model is attractive because industrial company is required to report GHG emissions
    b. Convener identifies that the amount of embedded energy in a product and GHG emissions combine to create motivation within industry.
        i. While universal production of GHG increases, measurements can show that the per unit production of GHG decreases. This will allow industry to monitor production per unit efficiency.
    c. Participant states most companies have the data but have not calculated production unit/energy expenditure for a given time period (monthly, yearly)
    d. Participant states that depending on the industrial customer, energy percentage in budget will range widely. Participant states that large energy users will be more active in this process.

6. Discussion Question 2: If yes, what agencies and organizations would need to be involved?
    a. CARB
    b. USEPA
    c. Cal EPA
    d. Local Air and Water Districts/ CA Air Pollution Control Officers Assoc
    e. Water Resources Board

f. Dept of General Services
g. IOUs
h. CEC
i. Northern CA Power Authority
j. Southern CA Public Power
k. LADWP
l. SMUD
m. Legislature
n. Governor's Office
o. CPUC
p. Trade Associations- CMTA, CLFP, SVLG, CLECA, NEMA
q. Rate payer groups
r. Environmental groups
s. CA Climate Action Registry

Question from participants asking about involvement of utilities if generation is done on site. Participant suggests that rules for interconnection needs to be addressed. If the energy is generated on site, who owns it? Co-production with the grid is complicated and expensive.

i. More efficient interconnection with utilities or become an "island"?

ii. Participant gives example: DC doesn't need to be interconnected and can be generated through renewables, distributed generation, etc. However currently once the energy is generated, it is fed back to the utility.

7. Discussion Question 3: How could metrics be established to identify whether performance goals are being met (upon which to base incentives and technical assistance)?

Summary

- Technology exists for closer monitoring (real-time)- especially for larger, more energy intensive facilities
- Additional submetering for a process or system is needed- this is an area that would benefit from financial assistance (retro-commissioning)
- Need more than submetering- need to be able to track continuous improvement- would require a different program approach to incentivize energy management
- Energy Performance Index (EPI) - tool currently defined for purchased fuel, but could be modified to be more inclusive. Available for selected sectors: cement, automobile assembly, corn wet milling, petroleum refining, draft—food processing, glass, pharmaceuticals. Based on reported census data.
- Benchmarking--Trade Associations: Portland Cement Assoc, Grocers Assoc
- Metrics
  i. Look at total consumption
  ii. Look at productivity
  iii. Link them
- International Performance Measurement and Verification Protocol (IPMVP)- 4 different methods; could **inform** this process
- How can/should a price signal be part of this mix?
- PUC approved cost-benefit methodology needed for onsite power- CHP and DG

a. The traditional method is not applicable to large industry. It is necessary to look at consumption in terms of total consumption and intensity
    i. From production company point of view, it is simple to calculate intensity from bill
    ii. Use readily available measurements in a new way, rather than recreating a new measurement system.
    iii. Regulatory agencies can get reports from utilities with the same data
    iv. Technology is already in place (meters already installed and monitored by utility)
b. Need to baseline savings per ton then have on-going ability to measure improvements
c. Grid wise organization working on technology that goes beyond traditional panel metering to sub-metering. Project level or conveyer-level metering to know where energy objectives are met or needs more improvement.
    i. Participant adds that many industrial companies do not have sub-metering in place
        1. Utility representative states that there is a lack of energy management systems in place in order to perform energy optimization process.
        2. Participant suggests utilities provide incentives for monitoring equipment.
    ii. Put continuous improvement and tracking in place to then utilize the added meters
        1. This strategy is forward thinking, because monitoring equipment, like sub-meters, will eventually become essential industry tools.
    iii. Convener suggests that this be placed in a package with incentives
    iv. EPA has existing metrics for certain industrial sector such as cement to calculate change but does monitors energy at a plant level
        1. Energy Performance Index (EPI): purchased fuel management tool used to model impacts of changes made, but could be modified; made for cement companies based on census data.
            a. Production and fuel use input and based on models, that is modelled nationally and companies are rated
            b. Measures performance improvements and rating increase that result from upgrades
            c. Sectors currently covered:
                i. Cement
                ii. Auto assembly
                iii. Corn Wet milling
                iv. Petroleum Refining
            d. Under development:

Food plants, glass plants, pharmaceutical manufacturing drafts being created

2. See www.energystar.gov/industry for more information
3. EPA can tell customers how much energy needs to be saved to improve the company's rating
4. EPI looks at past performance more than developing strategic metrics.

v. Trade Associations are using data collected to develop benchmarks for their industries

d. Metrics factors

i. Total consumption change (increase or decrease)

ii. Productivity

iii. Price of energy and variations of price throughout the day/ Price signal

1. There were mixed opinions as to the importance of a price signal in determining company behavior.

e. International Performance Measurement and Verification Protocol (IPMVP)

i. Currently not built for industrial sector but participant suggests industrial sector see if approaches for other sectors can be leveraged for industry

1. Participant stresses the need to use the correct protocol (of 4 protocols)

ii. Utility representative states that industrial sector companies cannot stop production and this needs to be considered when looking at the IPMVP

8. Additional comments

a. Utility representative states that the current model works well with small industries to optimize production on a measurable basis, participant states that this working model needs to not be replaced.

i. How can the new paradigm involve small industries?

ii. Participant suggests that they link new and existing models

b. CPUC approved cost-benefit methodology for onsite power including CHP and DG

i. Participant states this was begun but was never finalized

Action Items

No	Description	Responsible	Due by
2	Email participant list to attendees	Debi/PPC	