



CEE Commercial Kitchens Industry Partners Meeting

Commercial Kitchen Ventilation Systems:
Show Me the Savings!

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Commercial Program Manager
September 17, 2010
Chicago, IL

Ground Rules

- ▶ All perspectives valid and valued
- ▶ Interactive
- ▶ No such thing as a dumb question
- ▶ Fuel neutral
- ▶ Use of parking lot
- ▶ Follow CEE committee conduct guidelines

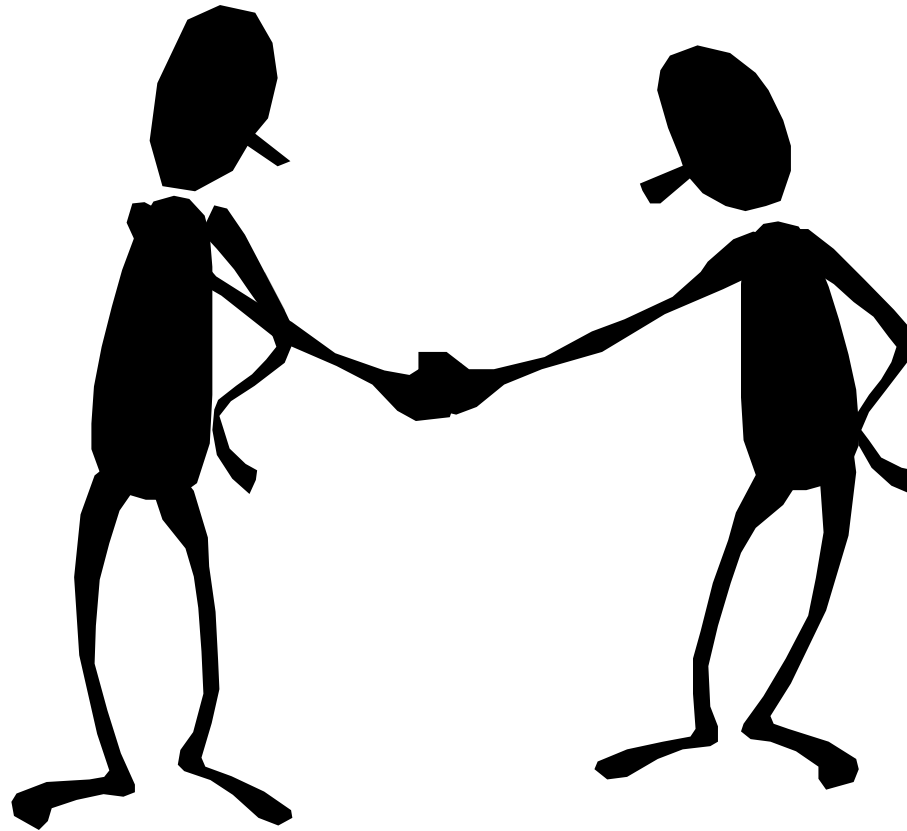
Objectives

- ▶ To inform efficiency program administrators about the state of savings opportunities in commercial kitchen ventilation
- ▶ To uncover program design and market challenges to the promotion and adoption of efficient commercial kitchen ventilation systems
- ▶ To determine if and how members and industry partners can work together to accelerate the adoption of efficient CKV system

Agenda

- ▶ Introductions
- ▶ Background
- ▶ State of the Savings Opportunity
- ▶ Program Drivers Round Robin
- ▶ Industry Drivers Round Robin
- ▶ Discussion

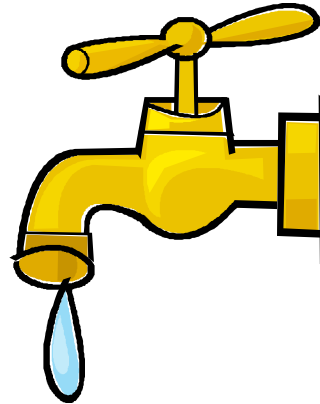
Introductions



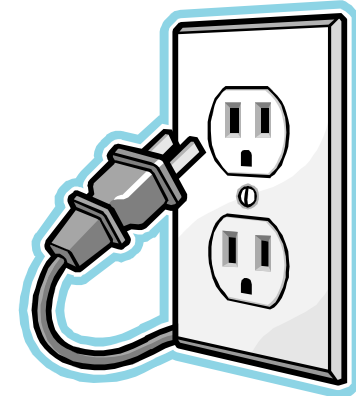
CEE Commercial Kitchens Initiative



Save 10-30%



Save 10-40%



Save 10-30%

- ▶ Launched December 2005
- ▶ Define energy and water efficient kitchen equipment
- ▶ Develop targeted market strategies to streamline product selection

Equipment Categories

CEE or ENERGY STAR Specifications



Advanced Member Specifications



Program Resources

CEE Commercial Programs
Commercial Kitchens Initiative

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[EE Program](#)
[Industry](#)
[Residential](#)
[Commercial](#)

- Buildings
- Clothes Washers
- Data Centers
- HVAC
- Kitchens
- Lighting
- New Construction
- Schools

CEE > [Commercial Kitchens](#) > [Info for Members](#) > Market Segments Program Guide

Market Segments Program Guide

Background and Purpose

CEE launched the Commercial Kitchens Initiative in 2005 to provide clear and credible definitions in the marketplace as to what constitutes highly efficient energy and water performance in cooking, refrigeration and sanitation equipment.

[Program Guide Home](#)
[Independent Restaurants](#)
[Chain Restaurants](#)
[Elementary and Secondary Schools](#)
[Higher Education, Business and Industry](#)
[Healthcare](#)

CEE
 Working Together, Advancing Efficiency

Energy-Water Program Partnerships

Summary and Analysis of CEE Member Experiences in Commercial Foodservice

Program Guidance

Consortium for Energy Efficiency
 Commercial Kitchens Program Summary

Member Information		Ventilation, Variable Controls for Exhaust	
CEE Member (links to website home page)	State or Province	Incentive	Efficiency Criteria
AVISTA Utilities (Washington)	Washington	\$650 / kCFM; \$130 / hp	Control with NG or Elec heat; Make-Up Air Unit
BC Hydro	British Columbia	5-15 HP: \$3,200 20-25 HP: \$6,400	
Commonwealth Edison	Illinois	New: \$300 / exhaust fan hp Retrofit: \$400 / exhaust fan hp	Temperature sensor on hood and/or optic sensor or end of hood; VSD on exhaust fan; VSD on makeup air unit

Cooking Up a New Approach for Program Design II: A Recipe for Success

Kim Ertekson and Afroz Khan, Consortium for Energy Efficiency
Marilyn Dore, New York State Energy Research and Development Agency
Andy Doeschot, Pacific Gas & Electric Company
Al Dieternann, Seattle Public Utilities
Ella Abadir, Southern California Gas Company
Kate Lewis, US Environmental Protection Agency
Mindy Gaultoye, Wisconsin Focus on Energy

ABSTRACT

Foodservice facilities consume over 2.5 times more energy per square foot than typical commercial buildings—427 trillion British Thermal Units (Btus) of electricity and natural gas per year—yet are considered hard to reach markets for energy efficiency (EIA 2003). Due to the large potential for energy conservation at these facilities, efficiency programs across the nation have come together to better understand the complex decision-making structures that impact

Kitchen Ventilation Working Group

Fall 2009

- ▼ BC Hydro
- ▼ Cascade Gas
- ▼ Centerpoint Energy
- ▼ Con Edison
- ▼ Efficiency VT
- ▼ Energy Trust of Oregon
- ▼ EWEB
- ▼ MN Dept. of Commerce
- ▼ National Grid
- ▼ Natural Resources Canada
- ▼ NJ Office of Clean Energy
- ▼ NV Energy
- ▼ NYSERDA
- ▼ PG&E
- ▼ Snohomish County PUD
- ▼ SoCal Edison
- ▼ SoCalGas
- ▼ Union Gas
- ▼ Vermont Gas
- ▼ WI Focus

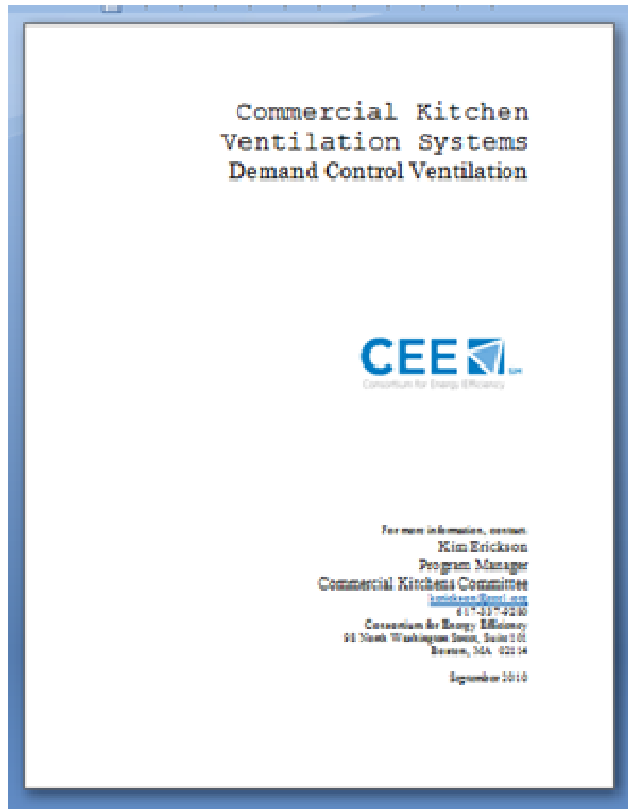
Kitchen Ventilation Workshop

January 2010

- ▶ Education
- ▶ Identify program needs
 - Program guidance
 - Metrics and test procedures
 - Data
- ▶ Identify scope
 - DCV
 - Whole system
 - Fan energy vs. fan plus HVAC savings



Program Guidance on DCV



- ▶ Progress from components to systems
- ▶ Start with guidance, then reassess
- ▶ Consider both fan and HVAC savings
- ▶ Still looking for HVAC savings data!

Next Steps



Agenda

- ▶ State of the Savings Opportunity
 - Tim Cole, Gas Technology Institute
- ▶ Program and Industry Drivers
 - Everyone
- ▶ Discussion

Program Drivers

- ▶ Why is your program interested in promoting energy efficient commercial kitchen ventilation systems?
- ▶ If you have a program: program objectives, program design (performance-based / prescriptive), why? Result, challenges?
- ▶ If your program pre-qualifies equipment, what are the requirements for pre-qualification?
- ▶ If you don't have a program: what do you need to start one?

Industry Drivers

- ▶ Company focus? Offerings to improve CKV efficiency?
- ▶ New, retrofit, or both?
- ▶ Geographic reach? What influences geographic reach?
- ▶ Market segments and geographic locations where more successful and why? Where are you challenged?
- ▶ How might voluntary efficiency program administrators help to overcome challenges?
- ▶ Support for program energy savings measurement and verification?
- ▶ Underserved areas: how can programs help?
- ▶ What is the most effective way for energy efficiency program administrators to work with you?
- ▶ Are there industry-wide efforts or resources that can be leveraged in characterizing and quantifying CVK performance and energy savings?

Contact



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