

Energy Recovery in Kitchen Hoods

Date reviewed: 02/26/2015

Description of Technology

Energy Saving Opportunity

This technology contributes to a restaurant's bottom line by capturing waste heat from the cook line and using it to preheat water. This heat recovery system or heat exchanger system has the potential to save kitchen's greenhouse gas emissions.

Sector(s):	<input type="checkbox"/>	Residential
	<input checked="" type="checkbox"/>	Commercial & Industrial

Applicability Criteria: Commercial Kitchen

Efficiency Improvement: Waste heat recovery

Energy (%) Savings Potential: ~20%

Demand (%) Reduction Potential: Variable

Strengths

Weakness

- Filter system protects the vents from grease and oil while captures waste heat from cook lines to preheat incoming cold water.
- Low maintenance cost.
- Every commercial restaurant has filter and ventilation system which can be replaced by ecothermal filter system.
- Product life cycle is almost 10 years.

- Savings depends on various factors like amount of time cooking was done, ambient temperature and water temperature.
- Idea is limited to commercial industry only where lots of heat is generated. Also the heat which is not used by water is wasted. So only some part of heat is being utilized.

**Third Party Analysis/
Previous MTAC Reviews**

**Suppliers Known
to MTAC**

MTAC Status

Rise Engineering has done a technical study regarding this technology at a commercial restaurant in PA

EcoThermal

Acknowledged to have energy savings potential and recommended to individual PA for their own EE program consideration

Market Development Issues

Cost:	Variable
Market Risk and Barriers:	Facility geometry present challenges for installation
Time to Market:	Currently on market
Simple Pay-back: (Years)	Varies

