

# Sometimes it pays to vent.

**Halton's premium commercial kitchen ventilation systems saved their customers over 30% on their energy usage, but rising energy prices prompted Halton to strive for even better results. Halton turned to Current Energy to partner in the creation of an original piece of equipment. The Halton-Current Energy partnership resulted in a kitchen ventilation system that reduces energy consumption an additional 20%.**

The Halton-Current Energy partnership left Halton's competitors in the dust by producing the new M.A.R.V.E.L. (Model-Based Automated Regulation of Ventilation Exhaust Levels) product using advanced Demand Control Ventilation (DCV) technology. Features include:

- » The addition of the Current Energy System optimizes exhaust flow based on the cooking equipment's heat signature. Savings is achieved by usage scheduling, modulating dampers, and variable speed exhaust fan control.
- » M.A.R.V.E.L. operates as a standalone system, or can be incorporated into an Internet-based energy management system which monitors and controls restaurant equipment, air conditioning, heating, lighting, low-temp refrigeration and more.
- » M.A.R.V.E.L. is the product of collaborative innovation by both companies. It incorporates Halton's patent for the unique method of DCV and incorporates Current Energy's patent pending IRIS™ (Infrared Radiation Index Sensor) technology to acquire the equipment's heat signature. An invisible beam views the cooking surface to adjust airflow to ensure the safe removal of heat and contaminants while maximizing savings and comfort.
- » Current Energy sensors and controls, coupled with Halton's vent hood technology created a total DCV package capable of savings in excess of 50%.

Additional sensors are used in tandem to monitor activity and system health. These sensors include:

- » Hood duct temperature sensors that are used in combination with the IRIS sensors to detect equipment start-up and status such as idle, cooking or off.
- » Hood filter differential pressure sensors that trigger an alarm if filters become clogged, dirty or if they are missing.
- » Optional interior and exterior temperature and humidity sensors that calculate energy savings using enthalpy.

Halton turned to Current Energy, because "it is important that we share ideas on product development and control

algorithms with a trusted partner. Together, we combine unique features and excellent capabilities to improve overall system performance and to differentiate our system in the marketplace."

– Dr. Andrey Livchak, CTO, Halton Group Americas

The resulting DCV solution excels in quality, comfort, safety, energy efficiency, and return on investment. Halton's M.A.R.V.E.L. system utilizes advanced infrared heat signature technology to control exhaust flow. And for even more energy savings, facilities control and convenience, the system can be incorporated in Current Energy's Internet-based control and monitoring system found in numerous QSR (Quick Serve Restaurants) and casual dining facilities around the world, such as Burger King®, McDonald's® and Wendy's®.

When you want the leading technology to control and automate your facility, contact Current Energy for high performance, quality, and innovation.

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Current Energy's customer focus was very helpful, and we were pleased with their highly qualified development department. Keep innovating!"

– Dr. Andrey Livchak, CTO, Halton Group Americas

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**Halton**  
CARE FOR INDOOR AIR



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Current Energy is a comprehensive resource for energy efficiency solutions and is a recipient of the U.S. Department of Energy's Energy Innovator Award. Current Energy is one of only six recipients of this prestigious award nationwide and is the first recipient in the state of Texas. Current Energy researches, develops, tests, implements and commissions innovative energy management solutions for commercial and residential applications, as well as for other product and service industries. For more information, please visit [currentenergy.com](http://currentenergy.com).

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