



Sustainability Case Study

National TAB Intelligence was approached by a major national restaurant chain client to help meet their sustainability goals on 1,000 locations nationally. The project consists of making modifications to their kitchen ventilation hoods, which allow for reduced airflow rates. NTi was responsible for determining the lowest possible airflow rates and implementing the changes on site. A critical component of NTi's role was to balance energy savings while ensuring performance of the equipment and code requirements.

Testing was performed at 74 locations as proof of concept. Initial airflows were measured at each location. Fan speeds were lowered to target levels and then a smoke capture and containment test was performed to ensure performance. Finally, outside air rates were lowered to minimum code required levels on the HVAC units to improve efficiency while still maintaining a neutral building pressure.

Fan power was reduced by an average of 2,016 kWh per year per store. Reduced ventilation rates are estimated to save 2,796 kWh per year per store in cooling and heating costs. That is a total of 4,812 kWh per store per year. Over the client's 1,000 store portfolio, this is anticipated to save approximately 4.8 million kWh.

Furthermore, initial conditions were identified that prevented optimal energy savings. A list of recommendations was provided to the client for further energy savings. Based on a sample of stores with ideal initial conditions, the client could expect to save 198% more or approximately 9.5 million kWh over their 1,000 store, 2.5 million square foot portfolio.

AT A GLANCE

2,016 kWh

Average fan power reduced per year per store.

2,796 kWh

Estimated ventilation rates saved per year per store.

4.8 MILLION kWh

Total anticipated savings across 1,000 store portfolio.

9.5 MILLION kWh

Projected savings across 1,000 stores once NTi's additional efficiency recommendations are completed.

