

Case Study – Jake’s Finer Foods (Houston)



While building their new Central Corporate Headquarters and Central Distribution Center, Jake’s worked with **Resource Efficiency Solutions, Inc. (RES)** to implement quick payback Energy Conservation Measures (ECMs) as summarized in the rest of this document.

New Facility Sets New Standard for Eco-Friendly Design and Efficiency

In February 2010, Jake’s Finer Foods has officially opened its new 180,000 square foot distribution facility and corporate headquarters in northwest Houston. The design of the new complex was heavily influenced by “best of breed” technologies that have been proven to increase efficiency, reduce costs, and significantly cut energy use and environmental waste.

Jake’s new distribution center, represents a tremendous leap forward for Jake’s, both in economic and ecological terms. According to Leonard Bench, Jake’s president and CEO, “We spent a great deal of time researching before we ever broke ground for new construction. As we discovered technologies that fit our profile, we adopted those into our design. Essentially, no issue was too small when it came to our design philosophy.”

Bench continues, “To be ‘green’ in industry today can have a wide variety of meanings. To us, the value of being environmentally conscious by design meant finding products and technologies that reduce our environmental footprint, while also bringing long-term savings that we’ll be able to pass on to our customers. Certain elements of those designs certainly cost more in the short run, but the long-term impact of the touches we’ve added here will have long-lasting effect not only on the environment, but also a real impact on the quality and safety of the foodservice products that our customers demand.”

Induction Lighting

- ✓ 100,000 hour life compared to 24,000 hours for High Pressure Sodium and 15,000 hours for Metal Halide.
- ✓ Instant hot and cold start-up and re-start.
- ✓ No flickering, ballast hum or noise.
- ✓ Is not affected by vibration.
- ✓ Low lumen depreciation over the life of the fixture.
- ✓ Higher Color Rendering Index (CRI).



High Bays inside Deep Freezers, Coolers and Dry Storage

Designed

332 T5 Fixtures
6 Lamps @54 Watts=
324 Watts per Fixture



Used

332 - 250 Watt Induction Fixtures
1 Lamp @ 250 Watts =
250 Watts per Fixture



The amount of watts saved by using the 250w Inductions fixtures, instead of the designed T5 fixtures, is 74 watts per fixture. At 332 total fixtures Jake's is saving 215,216 KwH per year; at 11¢ per KwH this equals **\$23,674 in energy savings each year!** Plus with a five times longer lamp life and 1/6 as many lamps, Jake's will be saving on the cost of labor to change the lamps and ballast as well as reducing their impact on the environment by avoiding disposal of the T5 lamps.



114 fixtures for the Dry Warehouse (70°+)



44 fixtures for Jake's cold storage warehouse (40 °+)



79 fixtures in the freezer warehouse (28°+)

*95 fixtures in the Deep Freeze warehouse (-10°)

* Used coated amalgam to allow lamps to work to -40°



Exterior Pole Mounted Floods

Designed

28 - 1000 watt HPS
1150 watts with ballast



Used

28 - 400 Watt Induction Pole Mounted Floods



By using 400 watt Induction pole mounted floods instead of the suggested 1150 watt (with ballast) High Pressure Sodium, Jake's is saving 750 watts per fixture. With a run time of 12 hours a day, or 4380 hours a year, that's a total savings of over \$10,000 a year!



Exterior Wall Mounted Floods

Designed

33 – 400 Watt HPS
465 with ballast

Used

33 – 200 Watt Induction Wall Mounted Floods



Jake's Finer Foods continued on their energy savings by implementing the use of 200 watt Induction wall mounted floods; saving 265 watts per fixture by choosing not to use the suggested 465 watt with ballast HPS. Plus this solved the concern for safety since the Induction lights have a higher CRI of 82, contrasting to the HPS that have a CRI of only 27.

- CRI stands for Color Rendering Index which is a scale that measures the combined wavelengths of different colors in light.
- Higher CRI equals increased visibility.
- Lower CRI gives off a yellow tint and skews colors.

CRI (Color Rendering Index)

