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College of Arts and Sciences Chemistry & Biochemistry Department





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Introducing TARGET

For their Spring 2015 class project, the team at Target Food Distribution Center in Denton, Texas invited students from the TWU Community Conversations in Sustainability (SCI 3013) class to visit their facility and see their operation in action. The students eagerly welcomed this



opportunity to apply what they have been studying in class to a real world Learn by Doing project.

Target Brands, Inc. has a long history of giving back to the communities where they do business, and has ecofriendly and globally sustainable practices which are a part of that. Target already does an outstanding job with their corporate responsibility through charitable work within communities and being environmentally



conscientious through providing sustainable lifestyles and products, smart development, and efficient operations.

Our purpose is to bring those elements back to the distribution centers and challenge Target to make even greater strides locally through implementing

our newly suggested sustainable practices. Ideas for improving sustainable operations were offered in four areas: Energy Usage, Water Usage, Recycling and Human Resources. Selected highlights are included on this poster.

Human Resources Ideas

- \$ Issue reusable (stainless steel or glass) water bottles at no or low cost to employees, at least annually.
- \$ Offer a smoking cessation program, and make the distribution center a smoke-free work environment.
- \$\$ We suggest holding an annual health fair/fitness clinic at the distribution center, focusing on the health of employees and their families. This could be combined with something fun like a picnic.

Recycling Ideas

- \$ Place recycling bins in additional areas
- \$ Add hand dryers to bathroom to reduce paper waste (4)
- \$ Use recycled paper and print on both sides, reuse cups, and more recycling bins

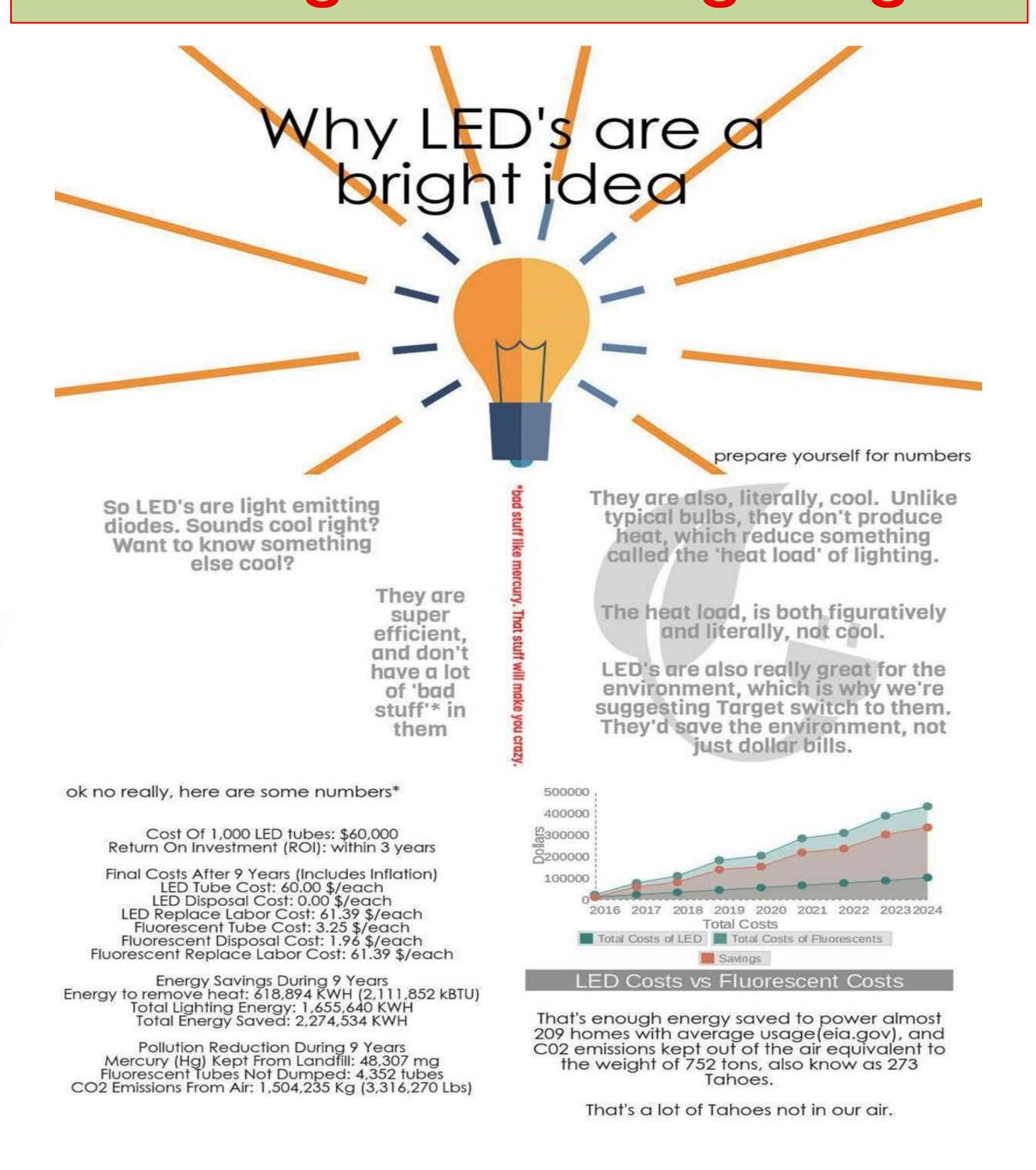
Reduce Energy Usage

- Install motion detectors on all lights/shorter time span to cut lights off
- \$ Install strip curtains between temperature areas to cut down on loss of cooling when doors in between areas are open
- \$\$ Install trailer skirts and boat tails for trailers to cut usage of diesel⁽³⁾
- **\$\$\$** Replace current fluorescent lighting throughout the distribution center with LED bulbs





Change to LED Lighting



*calculated with the help of EverLED based on 1000 LED replacements

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Reduce Water Usage

- Contact landscaping company to find out exact watering schedule/lengths and see if there are any areas that can be improved. Suggested schedule: 10 minutes per hour per station at 3, 4, and 5 a.m., but only once per week in warm weather. Reduce frequency in colder months. Watering infrequently and deeply promotes deep root formation and water conservation. Watering in early morning hours reduces evaporation of water. (1,2)
- **\$\$** Reduce water pressure and wasted water in bathrooms by installing low-flow faucets, low-flush/dual flush toilets and waterless urinals
- \$\$ Plant (native) evergreen canopy trees (live oak) on west side of building to block sunlight to cut heat transfer from sunlight and make sure plants are native perennials
- **\$\$\$** Install a rainwater/condensate from refrigeration system/runoff collection system by collecting in barrels/tanks connected to the downspout (metal tube running from the roof's gutters to the ground) and reuse for landscape irrigation
- **\$\$\$** Install drainage and pre-treatment system for storm water before entering sewer drains to minimize chemical contaminants in area lakes.

Selected References

- 1. http://ag.arizona.edu/pubs/water/az1298/
- 2. http://www2.gcsaa.org/gcm/1999/jun99/06
- 3. http://nacfe.org/wp-content/uploads/2014/03/ICCT_trailer-tech-costs_20140218.pdf
- 4. http://smallbusiness.chron.com/cost-benefit-paper-towels-vs-hand-dryers-41923.htm

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