Philips Lightning Company
Salina, KS

Intern: Ignacio G. Garita
Major: Electrical Engineering
School: Kansas State University

The Company
Philips Lighting Co, is a division of Royal Philips Electronics, based in the Netherlands. Philips Lighting, located in Salina, Kansas, is considered the largest producer of fluorescent lamps in the world. The Salina plant has five main lines and employees around 400 people.

Project Background
Philips Lighting produces a variety of fluorescent lamps in their Salina plant. Before Ignacio Garita arrived, Philips Lighting knew they were throwing away large quantities of waste lamps but had no information on the quantity. Philips sends their waste lamps to an outside recycling company instead of processing them in-house. Garita's project was to track and record the quantity of waste lamps and recommend a way to recycle them in-house.

Incentives for Change
Philips is an environmentally conscientious company and is always on the lookout for ways to increase its efficiency and support the environment. Philips understands that recycling lamp waste has many benefits for their company and the environment. In-house recycling of lamp waste has already been implemented in many other Philips' plants, because of its known benefit to Philips Lighting.

Projects Reviewed for P2 Potential
Lamp Waste Recycling
Garita concluded that every hour, 1,214 lamps are lost to waste in the Salina plant. All the waste lamps are sent to a crusher in-house and then transported 300 miles to a recycle company. By recycling this waste in-house, Philips can save money on transportation and parts. The two types of in-house lamp recycling machinery that Garita considered were "crushing-separation" and "end-cut" machinery. Crushing-separation takes all the lamp waste, separates the glass from the metal, and crushes the glass so it can be reused. The end-cut method cuts off the ends of a completed lamp and returns the glass to be reused. To decide which type of machinery was most beneficial, Garita studied the lamp waste to determine how much was metal and how much was already broken. By the end of the summer Garita concluded that the crushing-separation machine would work best. Garita's estimates show that Philips would save $1,471 a day on raw materials, energy, and transportation if they purchase either of the recycling machines. Garita was not able to come up with a final solution for his project but has provided Philips Lighting with two options on how they can recycle in-house and save the plant $537,280 a year.

Summary of 2007 P2 intern recommendations for Philips Lighting Company			
Project Description	Environmental Impact	Annual Cost Savings	Status
Lamp Waste In-House Recycling	Reduce waste by 4,088 tons/year and	$537,280.00	Recommended, but needs further

	reduce energy use by 36,902 Therms/year		research