

Rolls-Royce Corporation

# Indianapolis

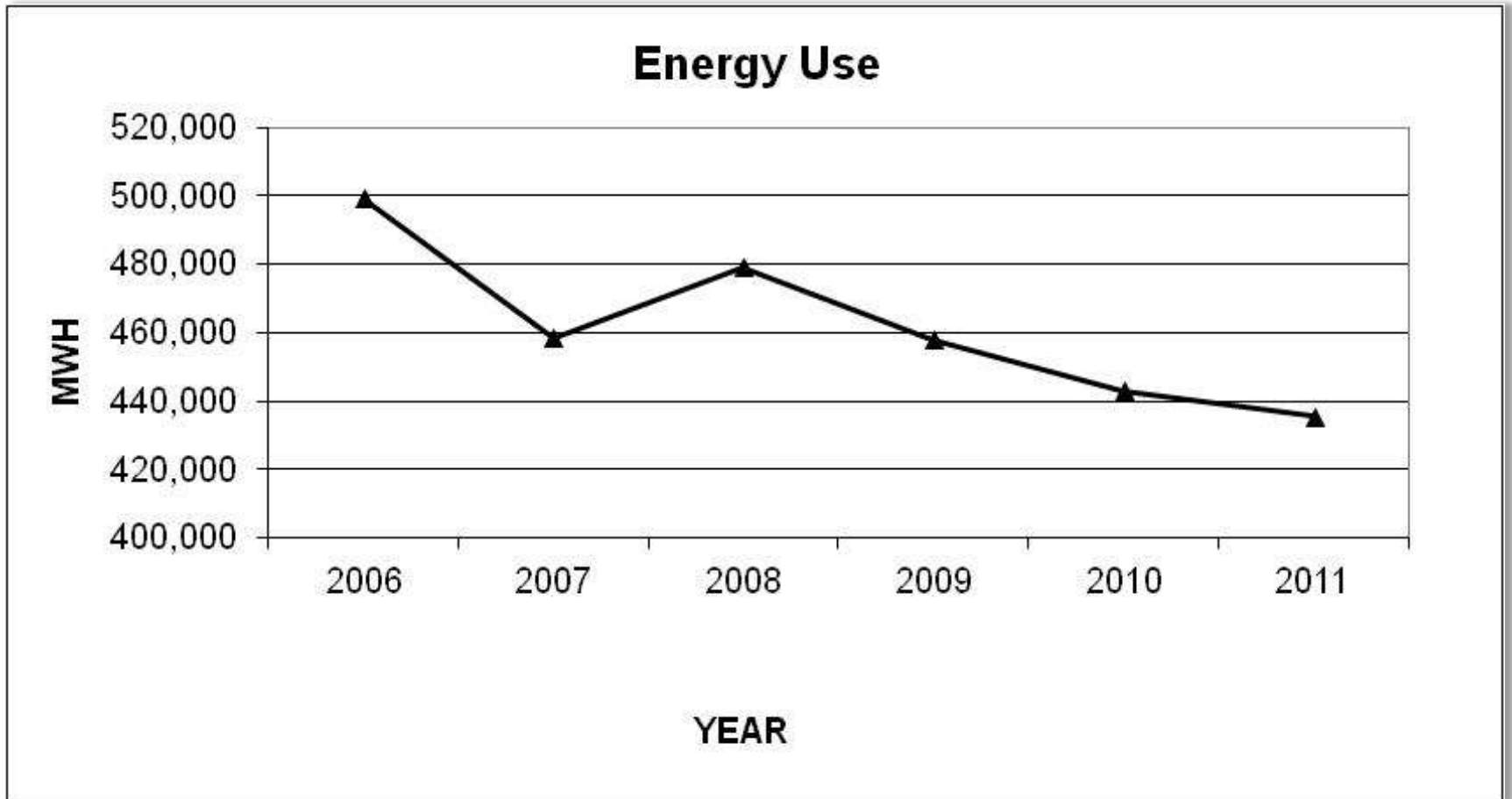
## Status of Our Environmental Journey

*March 7<sup>th</sup> - 2012*



# Indianapolis Total Energy Use

2006-2011



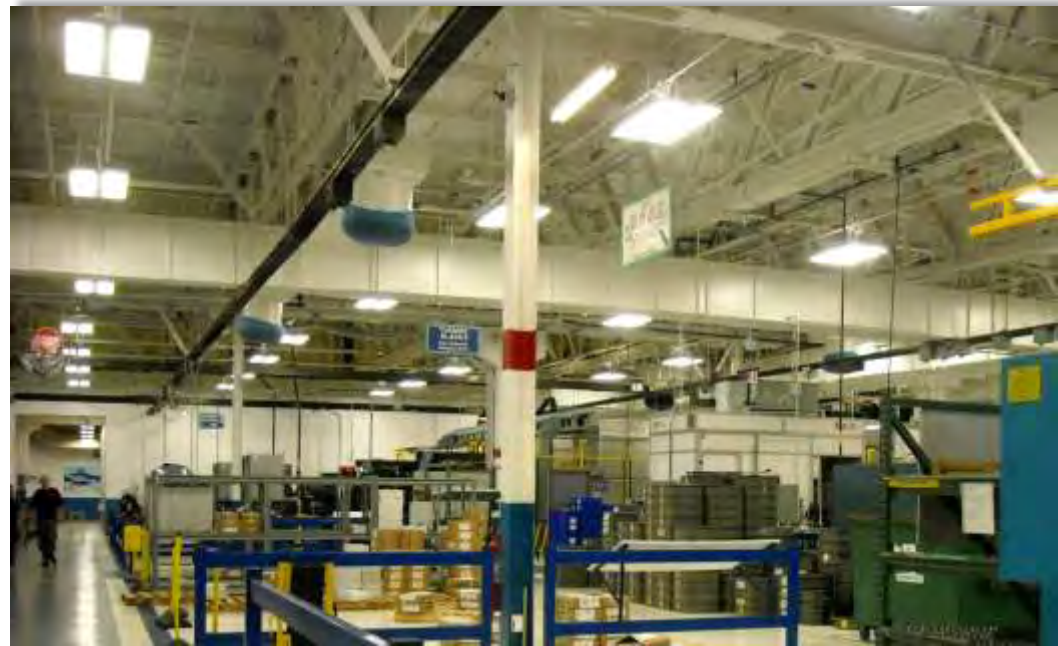
# Plant 5 & 8 Projects

	<b>GWh Savings</b>	<b>Cost Savings</b>		<b>Timing</b>
<b>Plt 8 Fac. Cooling Tower Automation</b>	<b>2.1</b>	<b>\$65K</b>		<b>2<sup>nd</sup> QTR 2011</b>
<b>Boiler Economizers</b>	<b>14.0</b>	<b>\$330K</b>		<b>2<sup>nd</sup> QTR 2011</b>
<b>Deaerator Tank</b>	<b>4.2</b>	<b>\$100K</b>		<b>2<sup>nd</sup> QTR 2011</b>
<b>Additional Plant 5 Lighting</b>	<b>9.3</b>	<b>\$560K</b>		<b>Under Construction</b>

# Lighting Projects

## *New T8 Fixtures and Occupancy Sensors*

- **Plant 5 Assy & Test**
  - 1.26 Mil KWH
  - Savings: \$69K
- **Plant 8 Model Shop**
  - 5.1 Mil KWH
  - Savings: \$273K
- **Plant 8 Out Buildings**
  - .73 Mil KWH
  - Savings: \$39K



# Active Management of 250 PSI Steam Line

*Not All Improvements Have to Come Through Investment*

- Steam Line to Engine Test Facility
- 12,000 lbs of steam/hr to maintain temperature
- Potential Savings per day = .084 GWh / \$3,600

## Actual Savings

- Since 1/1/2011 through 12/31/11, Line has been out of service for 196 days.
- 56,448 mlbs steam saved or 16.46 GWH
- \$647,788 in energy (95%) and chemicals



# Production Generated By-Products

## *Grinding Wheels, Metal Chips & Sludge*



**0.5 Tons of  
Grinding  
Wheels  
Recycled**

- Production related streams are collected on the shop floor then moved to waste treatment
- Metal turnings, sludge, grinding wheels and ceramic are some of the recycled materials



**726 Tons of  
Metals  
Recycled**



**23 Tons of  
Filter Paper  
Recycled**



# Recycling of Used Materials

*Everyone is Needed To Succeed in Site-Wide Recycling Efforts*

- Most common waste streams have a recycling outlet onsite
- Further opportunity exists to promote recycling and make the process more visible to the general employee.



**7 Tons  
Electronics  
Recycled**



**100 Tons  
Paper  
Recycled**



**58 Tons  
Cardboard  
Recycled**

# Reuse: A Part of Our Pollution Prevention

## *Reusable Containers Improve Quality and Environmental Performance*

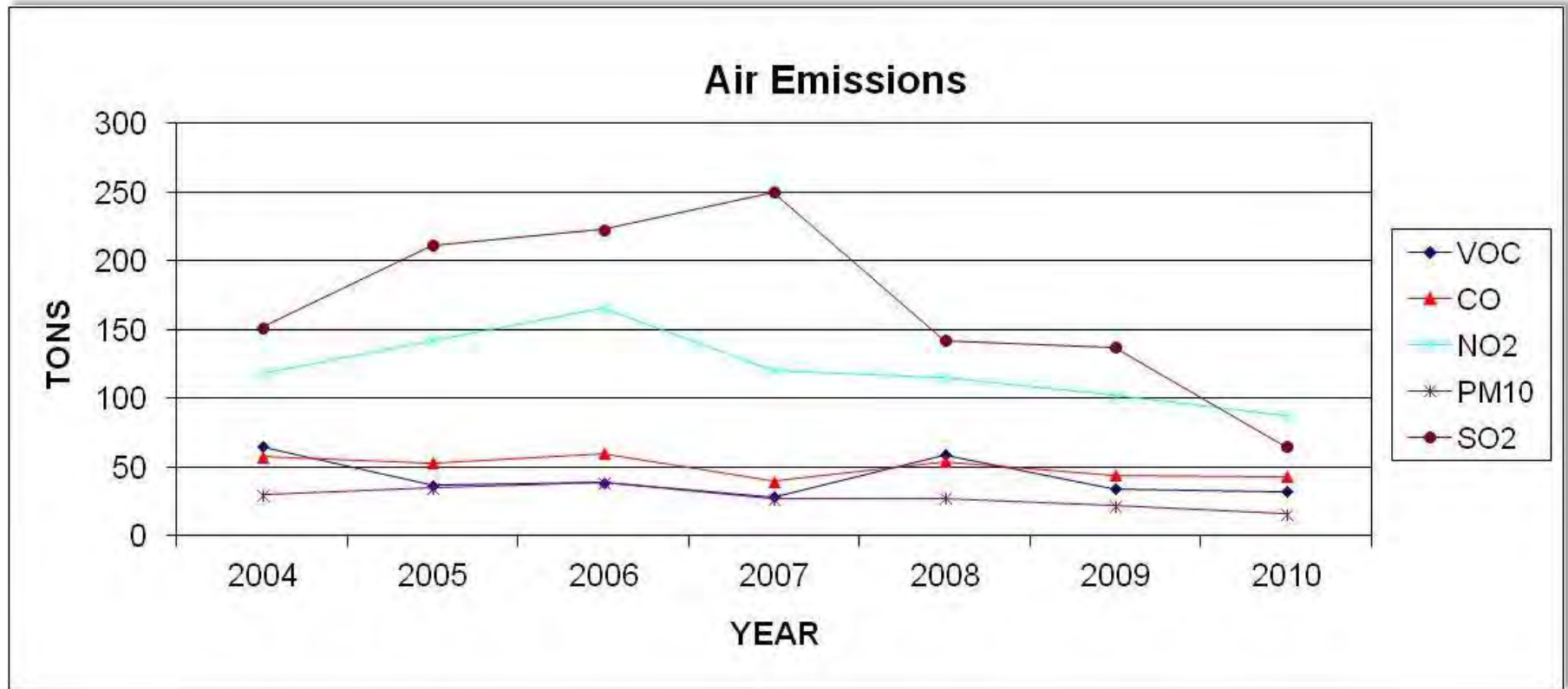
- Many formally cardboard containers have been converted into plastic containers.
- Used for internal and external customer shipments
- Further opportunity exists





# Indianapolis Air Emissions

2006-2011



# CoGen Information

*Not All Improvements Have to Come Through Investment*



- CoGen project started in 2001
- Generate 3.5 MWH electricity and 20,000 lb steam using landfill gas
- Estimated reduction of 33,000 tons of Green House Gas Emissions per year

# Current Pollution Prevention Opportunities



## *Identified Areas For Continual Improvement*

- Continue to improve energy efficiency with 1950's/60's Infrastructure
- Improve waste stream management to enable further recycling and waste minimization performance
- Further reduction / phase out of perchloroethylene degreasing

WS#	Common Name	Generated By	Facility	Total Waste by Category (Tons)
4	(IN) WASTE TREATMENT SLUDGE	WASTE ELECTROPLATING	PLANT 5&8	857.86
355	PLANT 8-30 YRD TRASH RO	GENERAL PLANT TRASH AND DEBRIS	PLANT 5&8	778.55
350	PLANT 5-42 YRD TRASH COMP	GENERAL PLANT TRASH AND DEBRIS	PLANT 5&8	457.5
66	(IN) LIQUID CYANIDE	PLATING	PLANT 5&8	319.17
352	PLANT 8-42 YRD TRASH COMP	GENERAL PLANT TRASH AND DEBRIS	PLANT 5&8	212.27
373	PLANT 8 - 40 YRD TRASH RO	GENERAL PLANT TRASH AND DEBRIS	PLANT 5&8	160.82
349	PLANT 5-20 YRD TRASH (WWT AREA)	GENERAL PLANT TRASH AND DEBRIS	PLANT 5&8	131.36
393	PLANT 5-40 YRD TRASH / PWR HOUSE	GENERAL PLANT TRASH AND DEBRIS	PLANT 5&8	118.32
64	(IN) GRAVEL IN DIESEL,JP4,JP5, JET FUEL	SPILL CLEAN UP	PLANT 5&8	113.7825
354	PLANT 8-20 YRD TRASH RO	GENERAL PLANT TRASH AND DEBRIS	PLANT 5&8	111.39

# Partners for Pollution Prevention

## *Teaming to Improve Our Environment and Business*

**Partners for Pollution Prevention**

The following questions will be answered on a 1 to 5 scale regarding your experience and observations at Rolls-Royce:

- 1. The housekeeping in the operations area was great.**  
1 (Strongly Disagree) -- 2 (Disagree) -- 3 (Neither Agree or Disagree) -- 4 (Agree) -- 5 (Strongly Agree)
- 2. The areas I toured were set up well for pollution prevention activities.**  
1 (Strongly Disagree) -- 2 (Disagree) -- 3 (Neither Agree or Disagree) -- 4 (Agree) -- 5 (Strongly Agree)
- 3. The areas I toured looked safe and free of hazards.**  
1 (Strongly Disagree) -- 2 (Disagree) -- 3 (Neither Agree or Disagree) -- 4 (Agree) -- 5 (Strongly Agree)
- 4. What 1 item were you most impressed with during the day tour today at Rolls-Royce?**
- 5. What 1 item do you feel can be improved based on the day tour today at Rolls-Royce?**
- 6. Please list any details of opportunities you believe Rolls-Royce should consider based on your visit and experience.**

- We Would Like Your Help!
- Please give use feedback on the provided forms and turn them into me or leave them in the auditorium.
- If you see opportunities based on your experience, please leave us as much details as possible so we can follow up.

# THANK YOU!