

**PFIZER PUERTO RICO OPERATIONS**

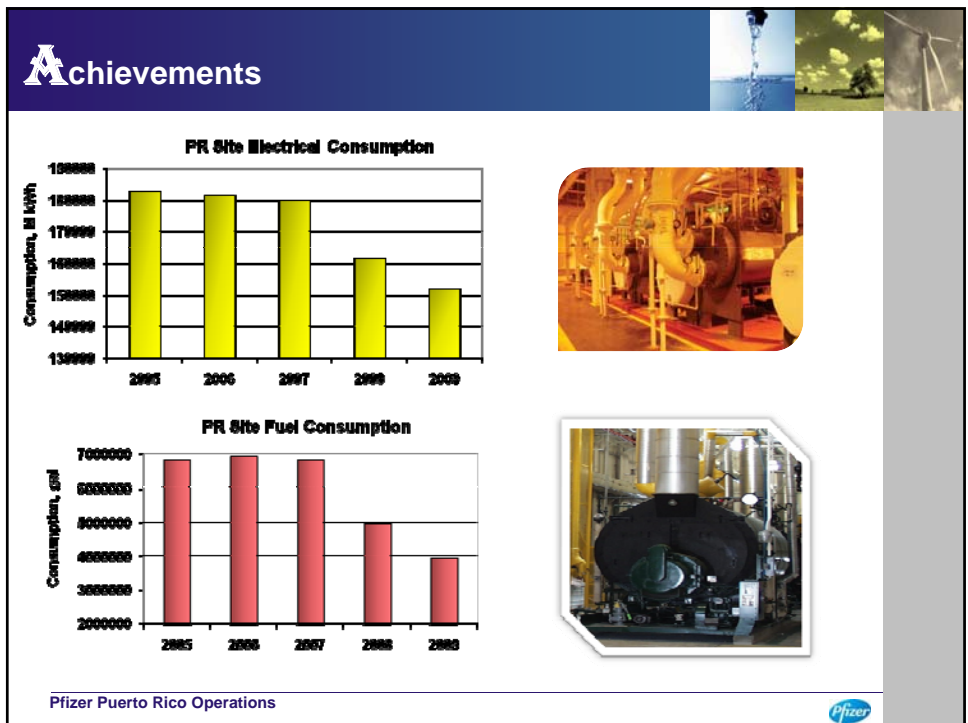
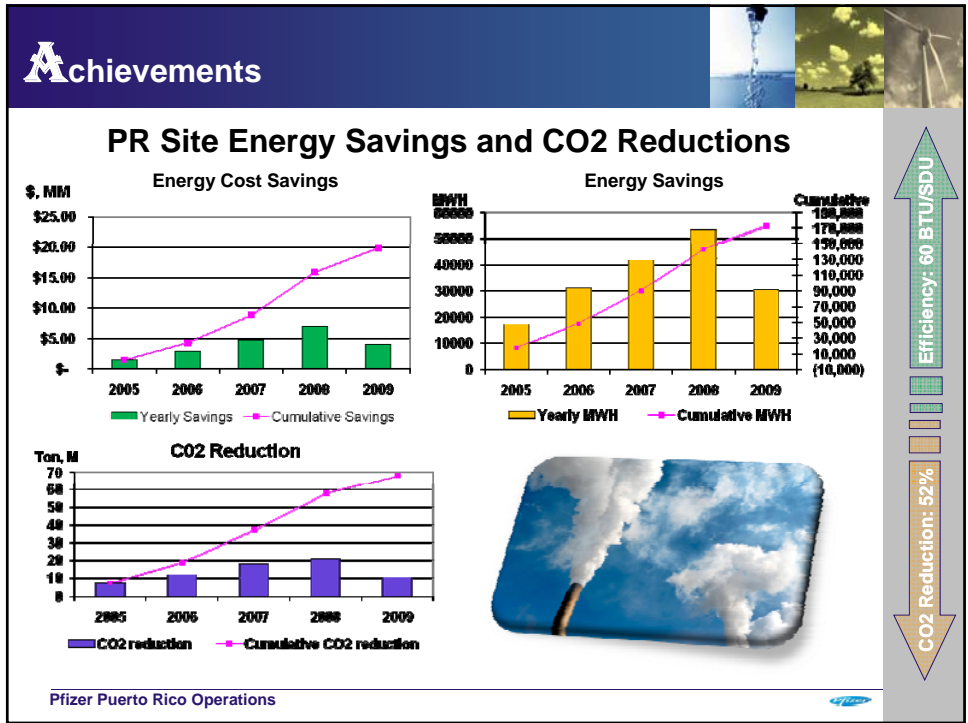


 **ENERGY AND  
RECYCLING PROGRAM  
OVERVIEW**  
May 2010



 **Energy Program**  
Pfizer Pharmaceuticals LLC  
Puerto Rico

Pfizer Puerto Rico Operations 

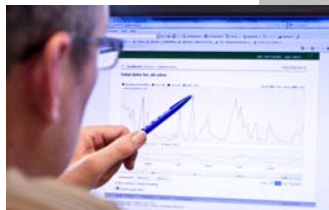


## Achievements

### Colleague Awareness Effort

#### – Usage of Engineering Tools

- Electricity Consumption Continuous Monitoring
  - responsible for ~\$2.3 MM in savings in last 2 years
- Utilities / Energy Assessments
- HVAC Modeling: Optimize air changes / %RH
- Energy Networks Participation (internal and external)



#### – Communications

- Monthly Operations Review Meetings Reporting
- Colleague Awareness / Recognition
  - EHS Awards / Green Building / Nomination to T&I
  - Awareness Campaigns



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## Main Initiatives

- Air Conditioning Modifications ~ \$6,800M
  - Shut off non production areas during non working hours
  - Reduce air changes / fresh air
  - Chilled Water System Modifications
- Lighting Retrofits ~ \$550M
  - Reduce number of lamps
  - Install Higher Efficiency / Sensors
- Compressed Air Improvements ~ \$1,400M
  - Improve system pressure control / Reduce operating pressure
  - Leaks repairs
- Steam System Modifications ~ \$600M
  - Improve Boilers Controls / Recover Waste Heat
  - Reduce System pressure

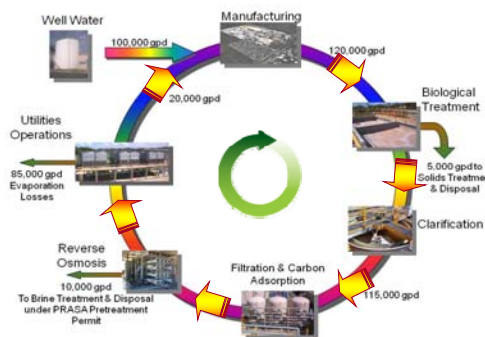


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## Main Initiatives

- Water Usage Reduction/Reuse ~ \$400M
  - Installation of waterless urinals
  - Installation of low consumption nozzles and shower heads
  - Increase concentration cycles in cooling towers / Reuse of HVAC condensate
  - Water Treatment / Reuse
- Others ~ \$6,550M
  - Consolidate operations / office space
  - Shut off non critical systems during non production hours (Vacuum, hoods)
  - Replace low efficiency motors / Increase Power factors
  - Continuous Monitoring Systems
  - Use of RFT tools for Operations optimization



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## Energy Conservation Program

- Future Initiative Focus - 10-15%/yr target
  - Heat machines for hot water requirements
  - Air Dryers Elimination
  - Barceloneta API HVAC reduction
  - HVAC Operational Setting and Controls
  - Energy use monitoring and grass roots colleague conservation program
  - Utility Operational Efficiencies


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# Renewable Energy Project




VB Location - Wind Turbines  
Potential Location




Ground Mounted PV panels  
For illustration only

## NRG TallTower™ Installation Manual and Specifications




20 m, 30 m, 30 m HD, 30 m SHD, 40 m, 40 m HD, 50 m, 50 m HD, 60 m NRG TallTowers

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# Recycling Program

Pfizer Pharmaceuticals LLC  
Puerto Rico



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## Background

### ❖ BEFORE

- Less than 20% of the total waste generated was recycled
- There were difficulties to find suppliers qualified by Pfizer for recycling services
- There were budget restrictions and high costs associated to the enlargement of the recycling program
- High cost for non-hazardous waste disposal



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## Background

### Pfizer Concerns on Solid Wastes Recycling

- EPA is taking a more assertive participation in regulating Municipal Landfills, taking a stronger enforcement against the landfill operations
- Recycling companies are dependent on volume to obtain profit
- Cost of segregating and managing the received material are high



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## Potential Opportunities

- **Contracting a Recycling company instead of a Waste Disposal company for handling wastes:**
  - Standardize prices for service
  - Reduce service cost
  - Increase recycling materials
  - Waste minimization
  - Reduction of incineration materials

Reciclaje del Norte, Inc.



Reciclaje de papel de periodico

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## Reciclaje del Norte: Proposal

- **Can manage our recyclable materials, having a full time expert to identify opportunities, identifying new markets for other waste streams.**
- **Minimum impact to current Janitorial services. No additional tasks to them.**
- **No additional resources to handle recycling programs.**

Reciclaje del Norte, Inc.

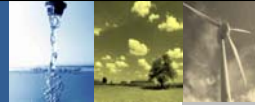


Recogido de materiales reciclables

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**F**act



This project, not only represents cost savings to the region, but minimizes Pfizer's environmental footprint in Puerto Rico.



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**F**act



**Segregation: Employee Participation**



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## Results

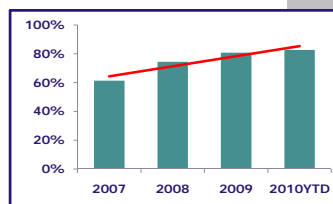
- **Barceloneta**
  - Cost reduction for non special waste of 42% from 2006 to 2007 (\$170,000/yr approximately)
  - Increased the recycling rate of the non-special waste from 59% to 79%
- **Caguas**
  - Program began in December 2006
  - Increased the recycling rate from 16% to 45% for the first month in 2006
  - Increased from 45% to 80% the first semester of 2007 for all the routine waste generated

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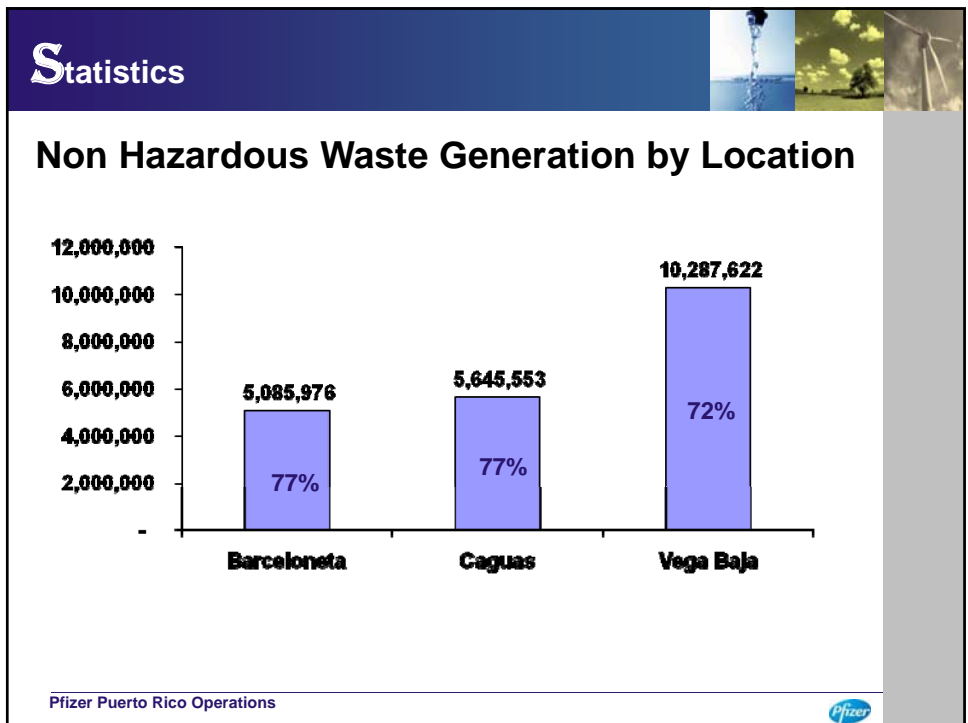
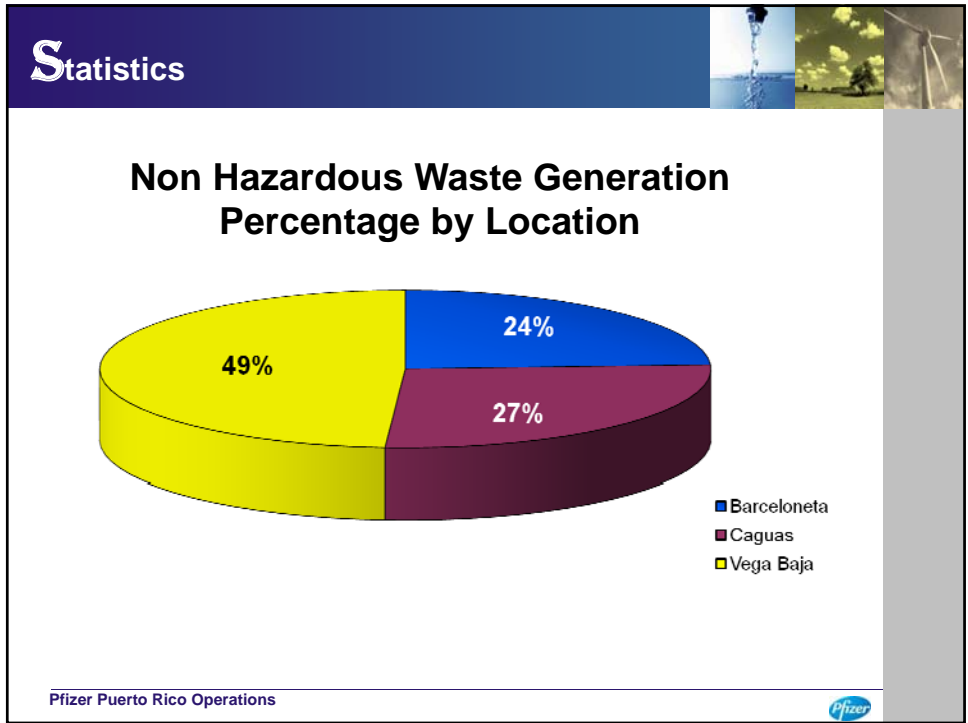
## Results (cont)

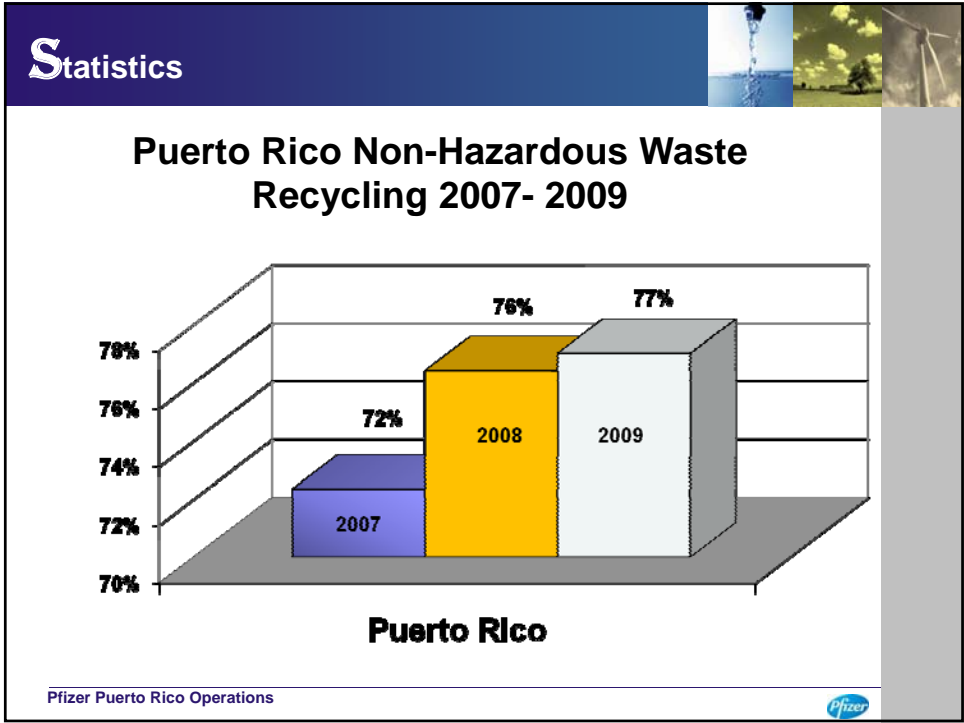
- **Vega Baja**
  - Program began in April 2007
  - Increased the recycling rate of the non-special waste from 25% to 83%
- PR sites cost reduction of \$325,000/yr approximately
- Significant increase in types of materials recycled for all PR sites



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### Awards

## Puerto Rico Integrated Recycling Program Green Building Recognition

**Puerto Rico Integrated Recycling Program Green Building Recognition**

Pfizer will leverage “green” consensus standards in a manner consistent with Pfizer’s values and commitment as a good Corporate Citizen. Pfizer will integrate green building strategies into our building management and construction processes to ensure the delivery of business value in a way that focuses on facility lifecycle/project first-cost balance while minimizing environmental impact.

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## Environmental Economies

	2007	2008	2009	3-Year Total
Saved Trees	28,624	44,554	35,822	109,000
Oil (Gallons)	614,180	995,912	1,989,908	3,600,000
Water (Gallons)	5,050,728	7,862,465	3,086,807	16,000,000
Landfill (cu. yds)	9,202	11,361	10,437	31,000



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## Opportunities

- Continuous evaluation of waste streams to capture recyclable material
- Evaluate and implement reusable gowning where applicable
- Reduce overall non-hazardous waste generation
- Manage domestic waste
- Simplify/ Reduce packaging components

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# Commitment



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# Q&A



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