

**The Exchange**  
**19 January 2012**



# **Army Net Zero Installation Conference**

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**Waste and Recycling**

## ➤ Contrast: The Exchange and Competitors

	Competitors	Exchange
<b>Funding</b>	Sales from customers	Sales from customers (NAF)
<b>Businesses</b>	One of the listed businesses	Large Retail, C-Stores, Fast Food (many), Convenience, Gas, Liquor, vending, others
<b>Regulations</b>	Standard business	Federal + Army + USAF + Installation + Standard business
<b>Sustainability Goals</b>	Cost/benefit based	Federal + Army + USAF + cost/benefit
<b>Customers</b>	Everyone	DoD connected
<b>Area of coverage</b>	Where profits are best	Worldwide, where needed
<b>Locations</b>	Economic 'sweet spots': Few restrictions, little commitment	Restricted, Installation selected. Long commitment
<b>Profits</b>	Stockholders + expansion + upgrades	2/3 to MWR, 1/3 to expansion + upgrades

- › **Energy:**
  - › Reduce Energy Intensity 3%/yr: EO13423
  - › Use Energy Star Equipment: EPAAct2005
  - › Use Best Practices for Power Mgt: EO13514
  - › Evaluate 25% of Buildings Annually: EISA2007
  - › Address Evaluation Findings: EISA2007
- › **Water:** Reduce Water Intensity 2%/yr: EO13423
- › **Waste:** Divert 50% of Waste from Landfills: EO13514 (2009)
- › **Waste:** Minimize waste through source reduction: EO13514 (2009)
- › **Petroleum Fuel:** Reduce Petroleum 2%/yr: EO13423
- › **Non-Petroleum Fuel:** Increase Non-Petroleum 10%/yr: EO13423
- › **LEED:** 10% Achieve LEED Silver: Army and Air Force



➤ **New Projects:**

- **LEED:** 100% Achieve LEED Silver: Army (2013) and Air Force (2012)
- High Performance Sustainable Buildings (HPSB)

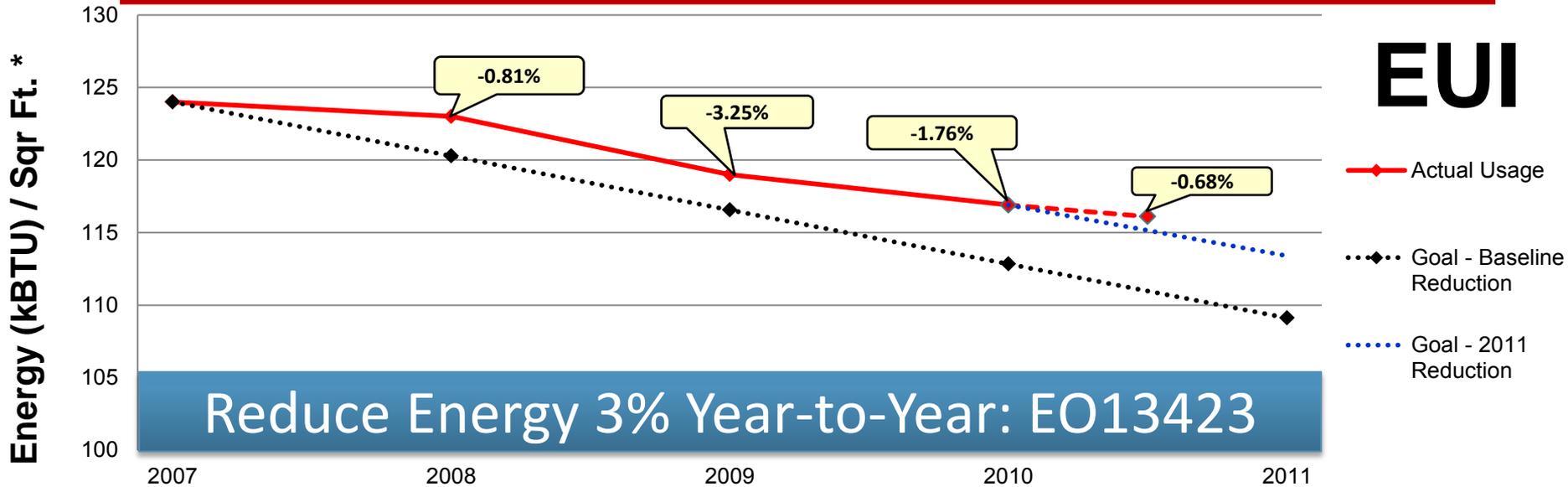
➤ **New and Existing Buildings:**

- **Utility funding challenges-R&I, OCONUS**
- **Net Zero Locations:**

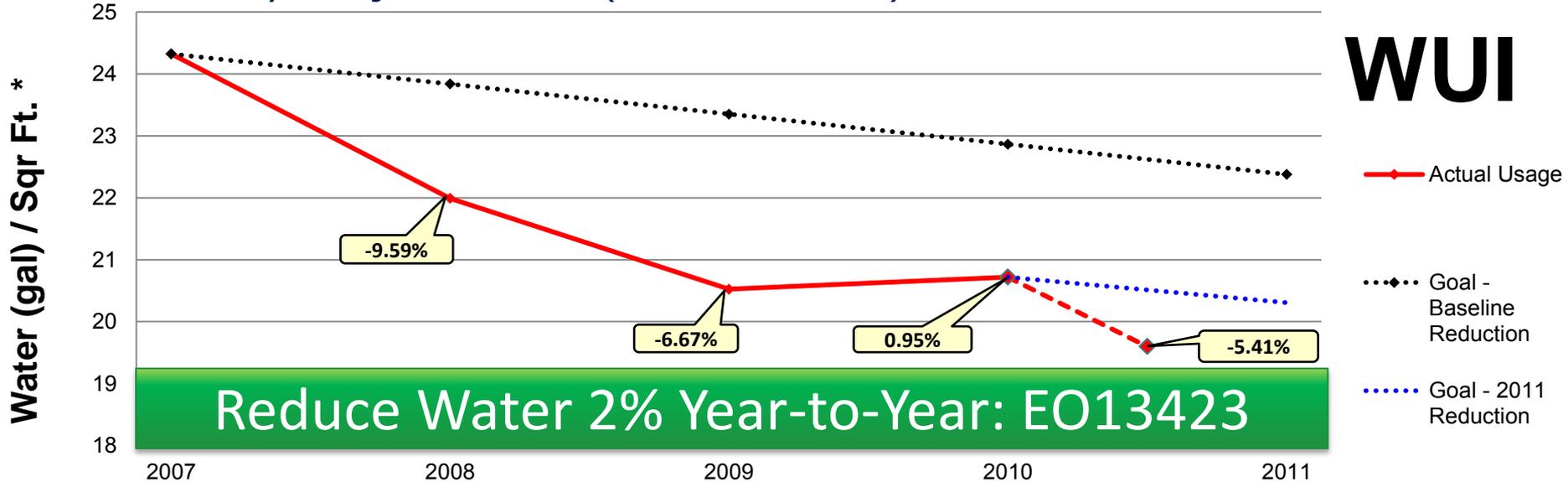
<b>Energy</b>	<b>Water</b>	<b>Waste</b>
Ft Detrick, MD	Aberdeen PG, MD	Ft Detrick, MD
Ft Hunter Liggett, CA	Camp Rilea, OR	Ft Hood, TX
Kwajalein Atoll	Ft Buchanan, PR	Ft Hunter Liggett, CA
Camp Parks, CA	Ft Riley, KS	Ft Polk, LA
Sierra Army Depot, CA	JBLM, WA	JBLM, WA
West Point, NY	Tobyhanna , PA	Grafenwoehr, GE
Ft Bliss, TX	Ft Bliss, TX	Ft Bliss, TX
Ft Carson, CO	Ft Carson, CO	Ft Carson, CO

➤ **Rebates for upgrades**

# Reduce Energy & Water Intensity



\* Includes metered data only excluding DCs and Data Center (60% of active CONUS sites)



\* Includes metered data only (64% of active CONUS sites)

## › Bottom Line Impact

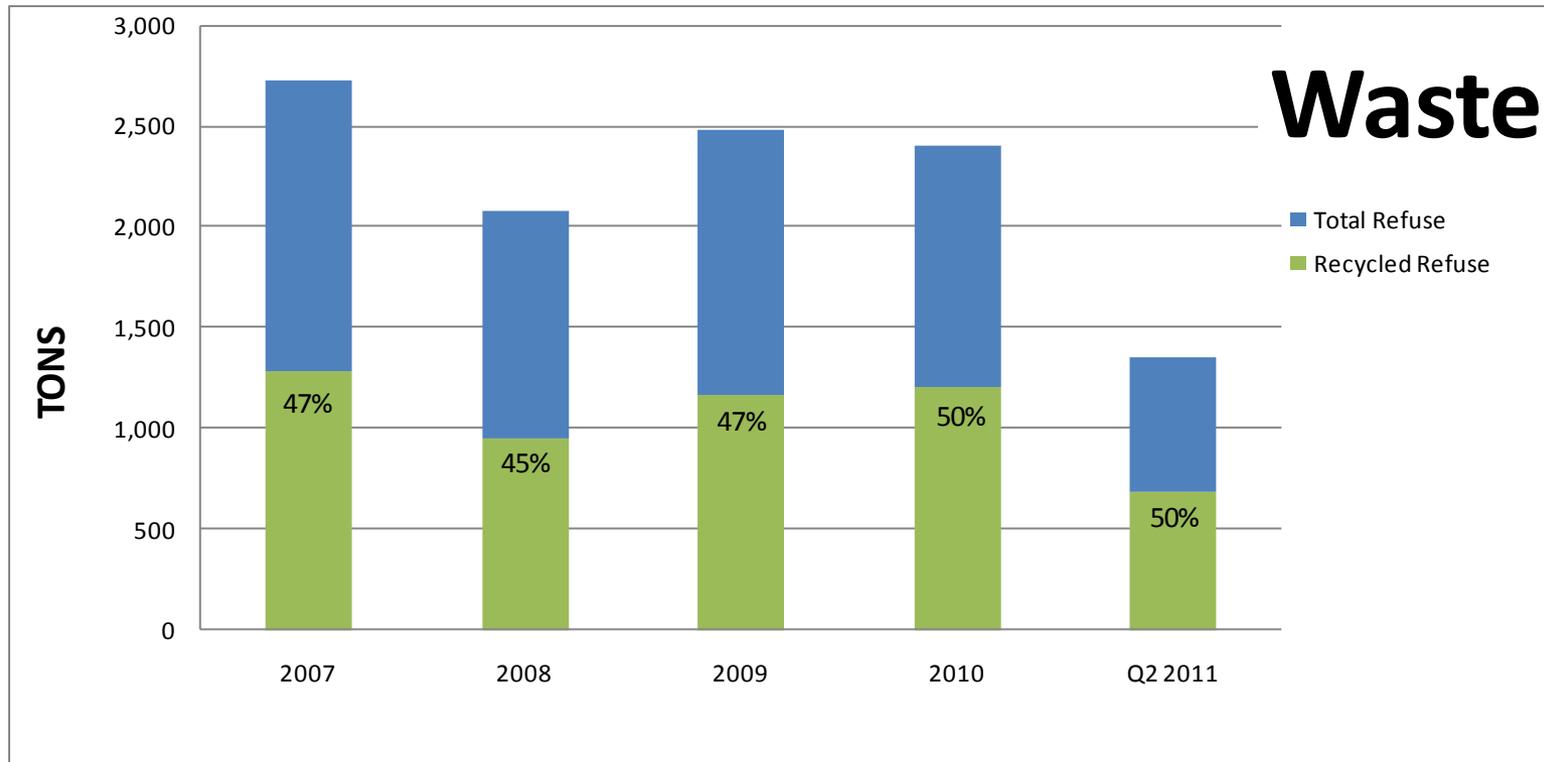
Costs	FY 08 through Q3 FY 11			
	FY 08	FY 09	FY 10	Q3 FY 11
Energy Costs	\$ 38,401,812	\$ 36,082,829	\$ 34,631,992	\$ 26,885,800
Water Costs	\$ 851,840	\$ 812,605	\$ 718,295	\$ 599,417
Waste Costs	\$ 3,377,732	\$ 3,413,471	\$ 2,317,229	\$ 2,772,334
Recycling Cost (Revenue)	\$ (65,113)	\$ (183,274)	\$ (671,951)	\$ (601,761)
<b>Total</b>	<b>\$ 42,566,271</b>	<b>\$ 40,125,631</b>	<b>\$ 36,995,565</b>	<b>\$ 29,655,790</b>

# Waste Reduction Challenges

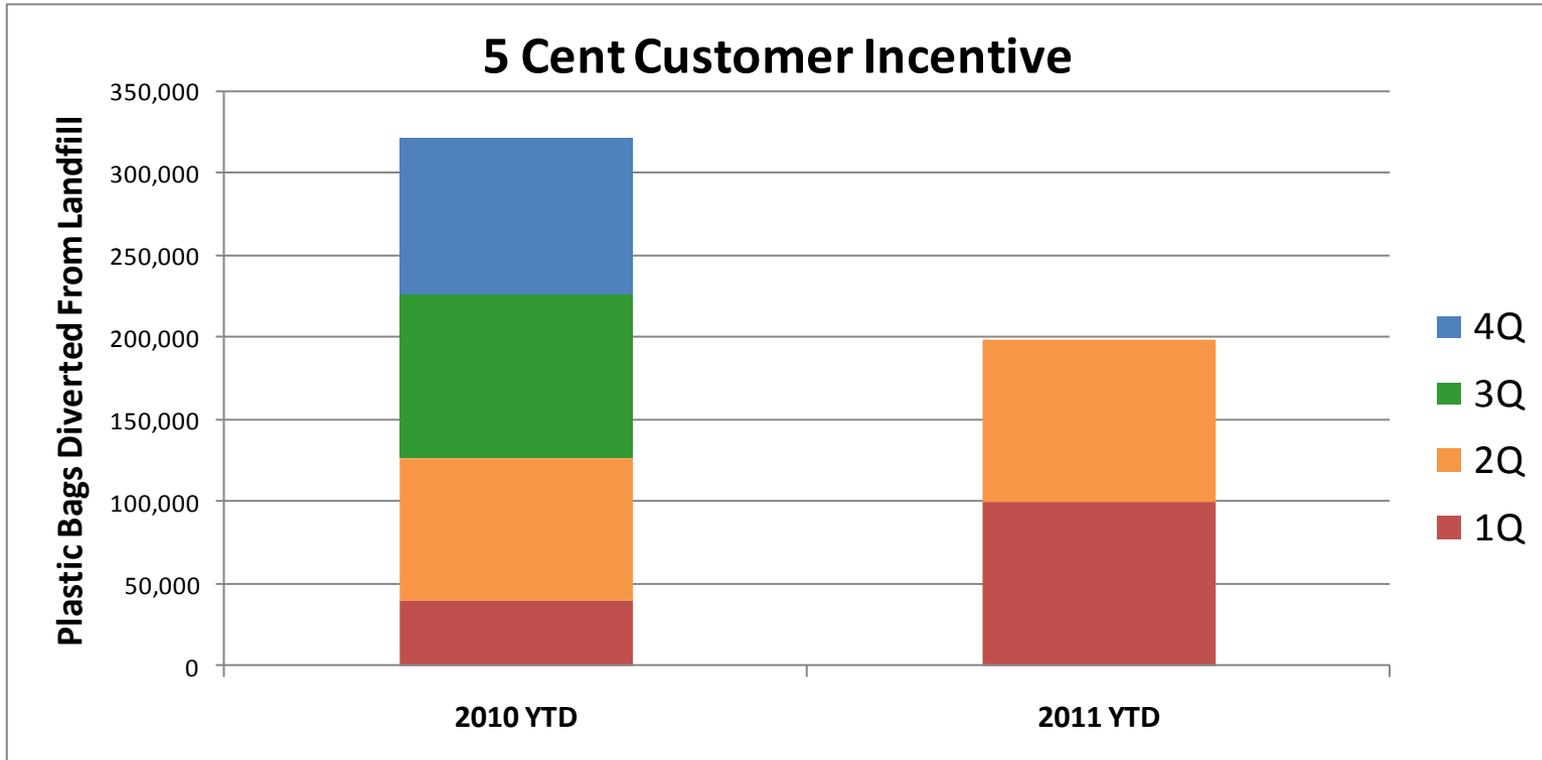
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- Measured, reportable, recognized results (EPA-Wastewise?)
- Accurately collecting credit for actions
- Which opportunities to pursue
- Increasing involvement

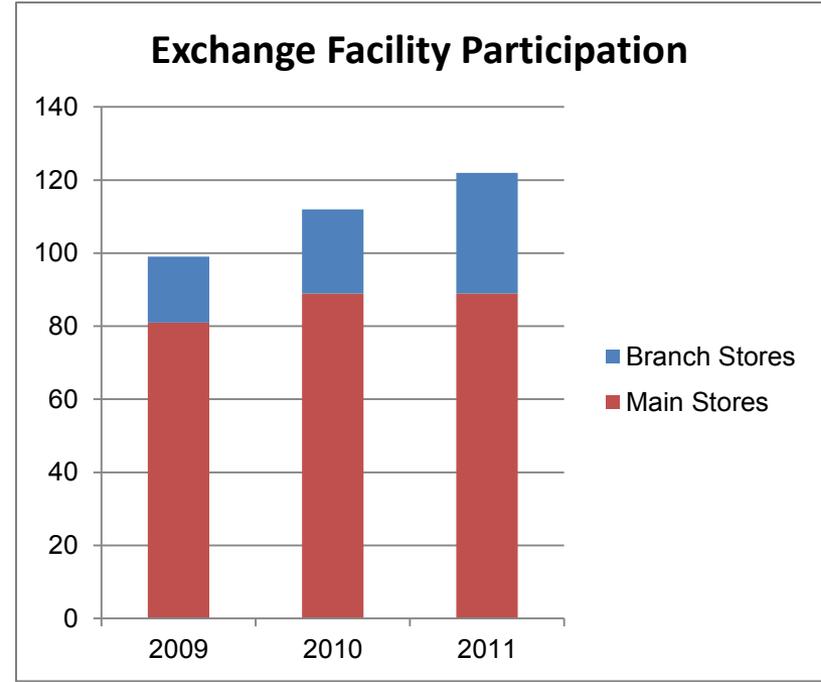
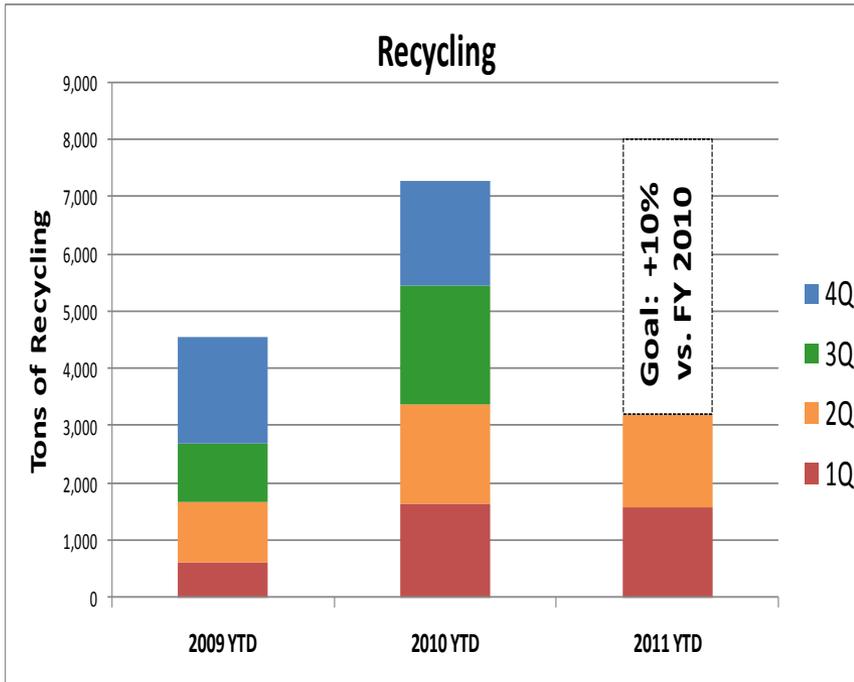
**Divert 50% of waste from landfill by 2015: EO13514**



## Divert 50% of waste from landfill by 2015: EO13514



## Divert 50% of waste from landfill by 2015: EO13514



- 23% increase in Branch Store participation
- 4% reduction in overall 2011 recycled tonnage
- 33% or \$108K increase in 2011 recycling revenue

# EXCHANGE™ Sustainability - the Dream Machine

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- Encourages recycling of bottles and cans
- Provides redeemable points for prizes
- Customer accesses website to redeem points for prizes
- 199 Installed kiosks



➤ **Reduce Waste**

- Net Worth Recycling:
- 324 Products recycled
- \$25K Paid to customers



➤ **New Technology Exchange:**

- Eligible products can include:
- Laptops
- Digital cameras
- Gaming consoles
- MP3/iPods
- GPS



# **X** EXCHANGE™ **Future Initiatives in Food Service**

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- **Compostable take-out food containers**
  - JBLM
  - Popeyes
  - Manchu Wok
  - Preliminary stages of project



- **Subway**
  - Stickers to replace plastic bags
  - Currently in testing



- **Interior fluorescent lighting upgrade**
  - Troffer retrofits of existing lighting
  - Reduce energy 25%-50%
  - Avoid landfill, reduced installation costs
  
- **Proposed: RTU-to-Central system upgrade:**
  - Replace RTU compressors w/central system
  - Reduce HVAC energy by 50%
  - Avoid sending RTU to landfill
  
- **Future: Container fill monitoring:**
  - Use existing HVAC system controls with monitoring
  - Weight tracking, 'full' email notifications
  - Recycling and Refuse tracking





**Thank You!**

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