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Using Utility Data to Drive
a Portfolio Sustainability Program
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ICF International

Portfolio Approach Based on ICF International's Selected Worldwide Sustainability Experience...



Current Sustainability Challenge

- Buildings are often where the energy, carbon and money are...
- New Drivers *Not* Single Building -
 - Sustainability
 - Carbon (**= inventories = portfolio utility data**)
 - The Economy
 - Securities and Exchange Commission and Mandatory Reporting Rule
- Portfolios Demand Different Approaches –
 - Environmental Footprints (**new data view**, sometimes public)
 - Operational Opportunities (low cost / no cost)
 - Portfolio-Wide Technology Buys are a Non-Starter
 - Audience Demands “Performance Improvement,” not “Conservation”

The fundamentals of our approach...

- It's all about the data.
- Leaders and laggards drive decision making and the search for insight, stories, and champions.
- Single facilities are less important, but do contain lessons for the entire corporate portfolio.
- This is not an audit. There are more collaborative, less invasive approaches.
- Existing success stories can drive a quick start.
- Operational improvements (low cost, no cost) are typically missed by the conventional energy services marketplace (i.e., they have to sell "stuff").
- Continuous improvement is progressive, allows refinement based on outcomes, adapts to market dynamics, and yields a stream of new stories.



Sustainability Program Fundamentals (are data driven)

1. Low Hanging Fruit

2. Data

3. Targets

4. Tracking Solution

5. Money

6. Employee Engagement

7. A Program Plan

8. Communications

Sustainability Program Myths (are data driven)

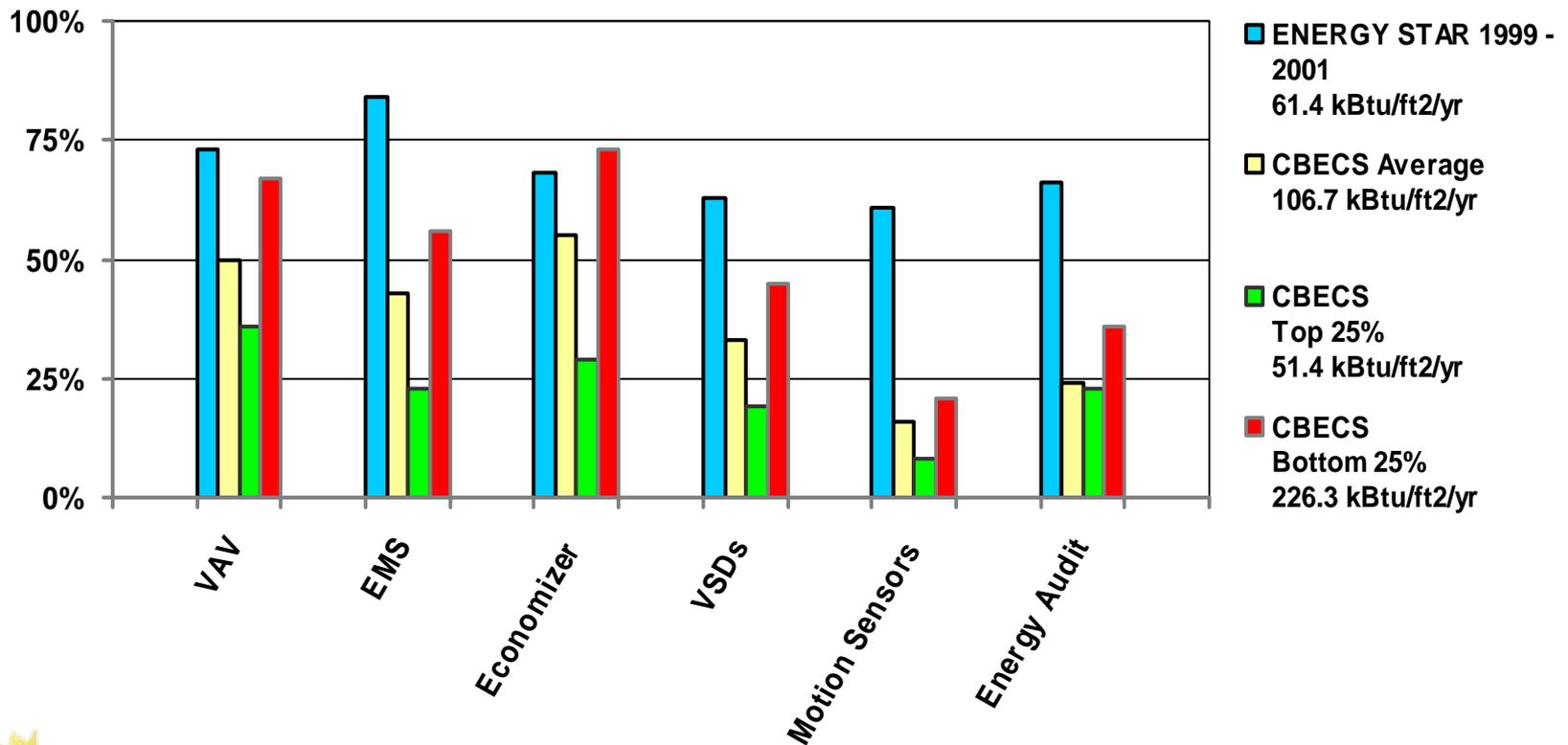
1. *We need submetered data, audits, and loans...*
2. *Tracking performance will be easy...*
3. *Implementing the tracking solution will be easy...*
4. *The tracking solution is our program...*
5. *Sorry, we have leased space...*
6. *We need a CSO and Green Team...*
7. *Hey! We're sustainable!*

Myth # 1

- We will need submetered data, building audits, and loans to buy technology...

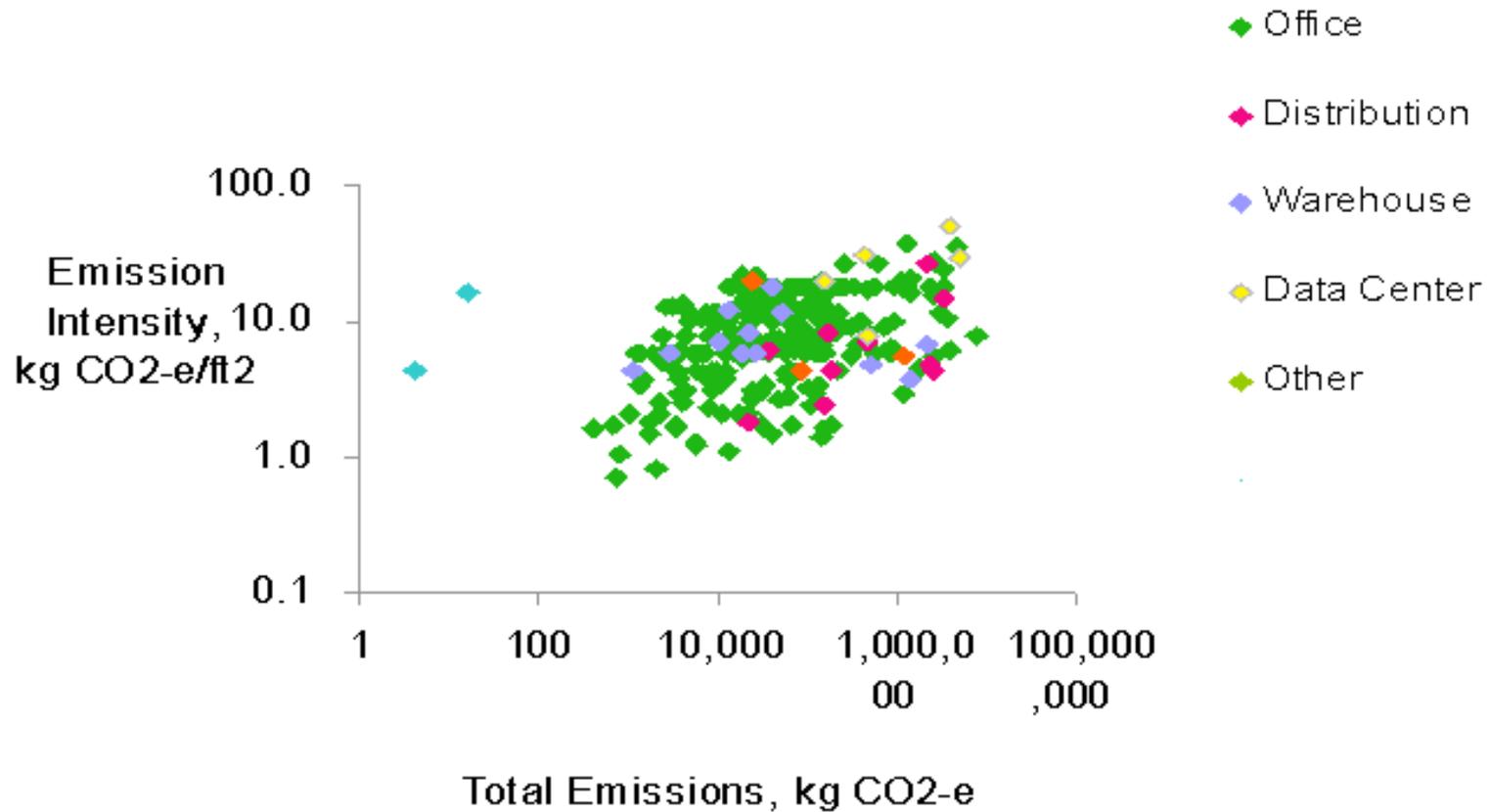
From the Energy Star "Class of" Studies

Technology Doesn't Always Equal Performance...



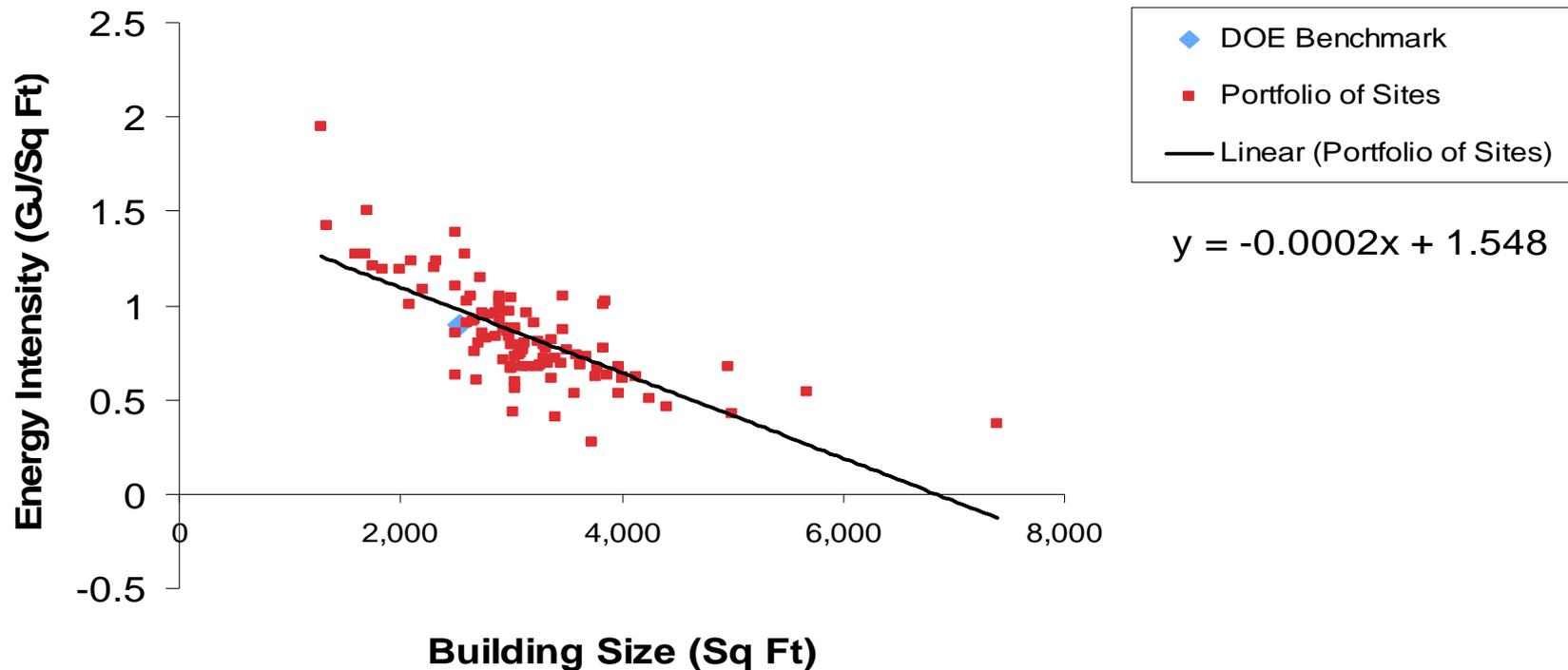
Portfolio Two

Emissions Intensity



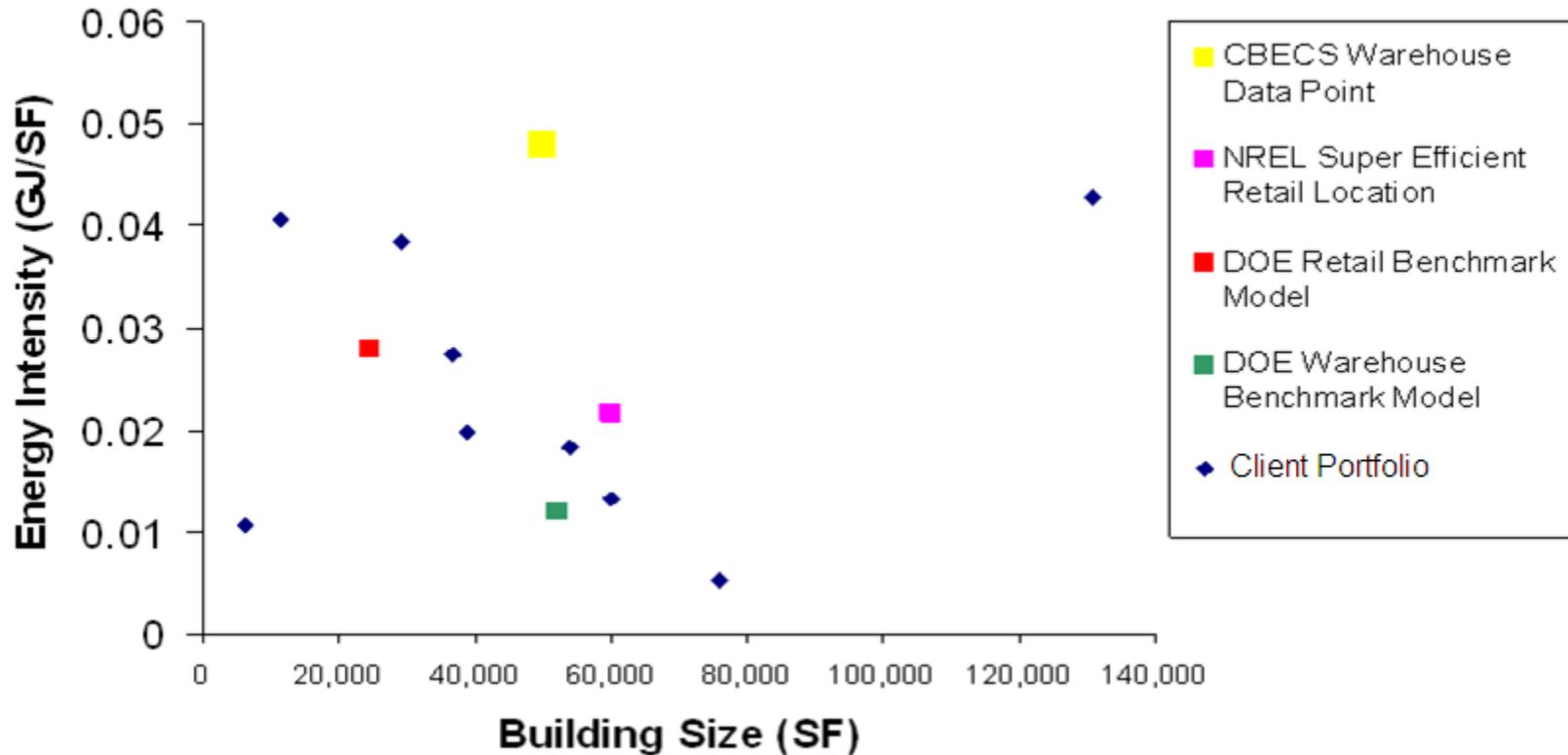
Portfolio Three

Select Fast Food Properties and Benchmarks



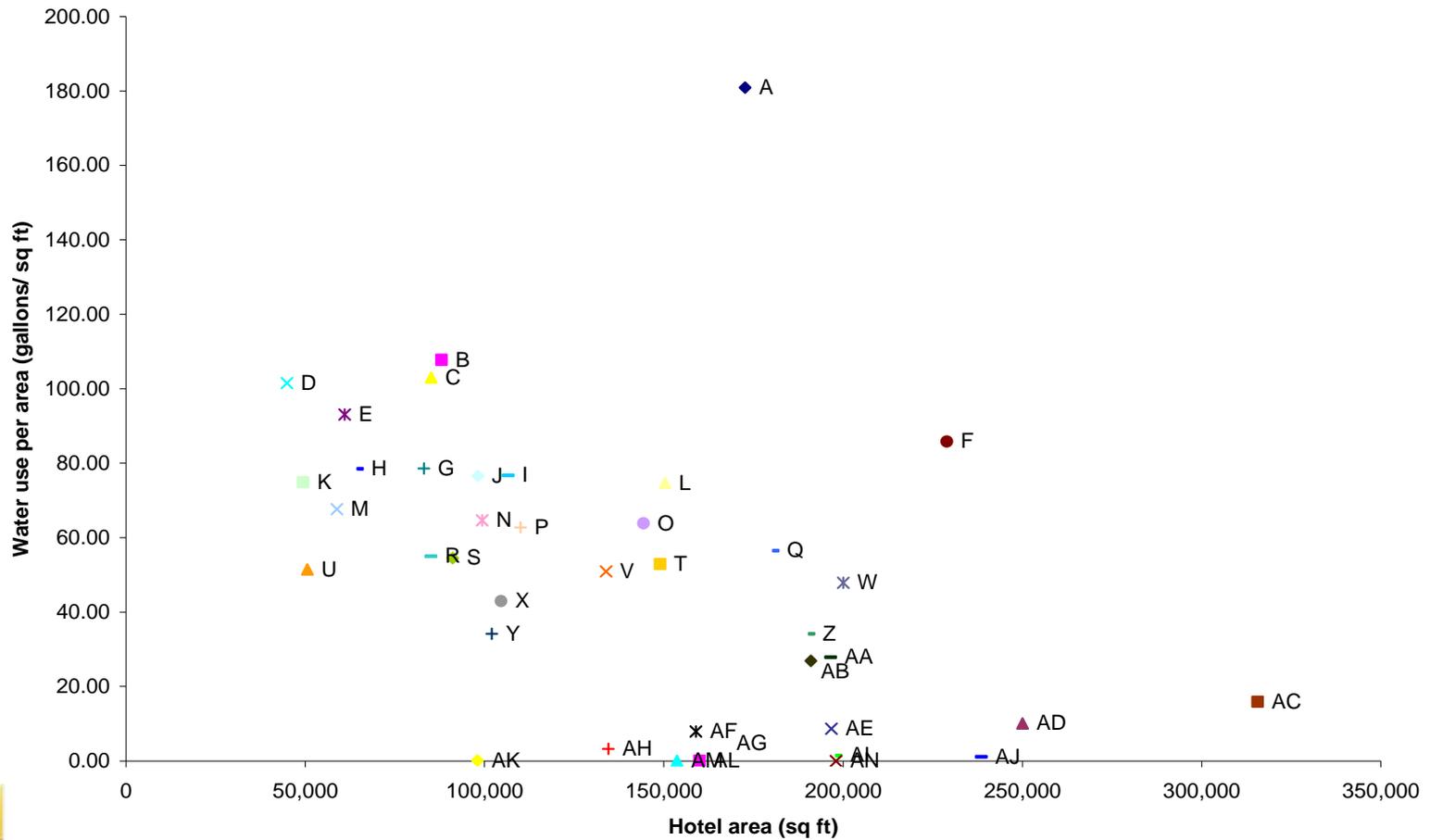
Portfolio Four

Selected Locations and External Benchmarks

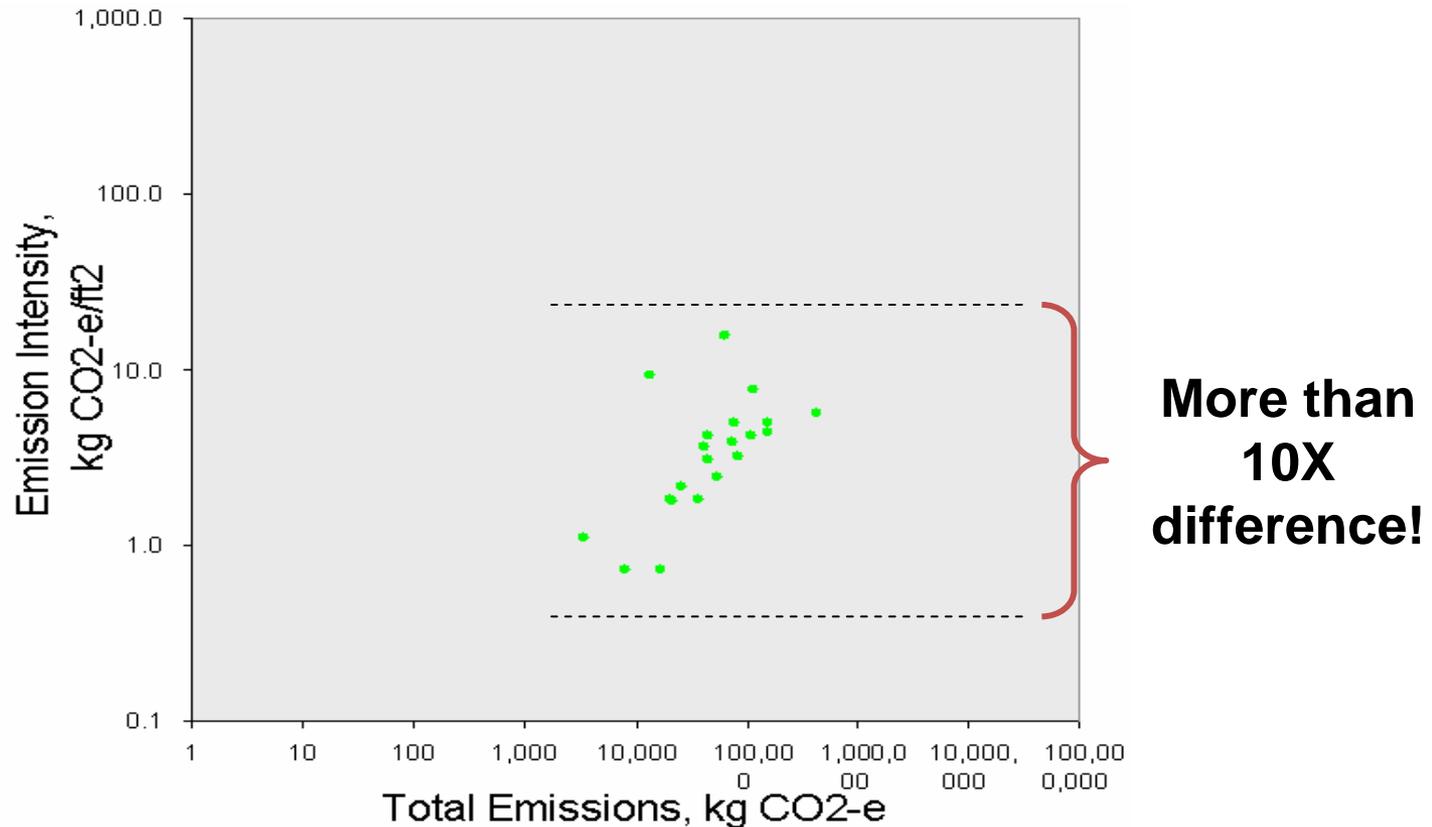


Water...

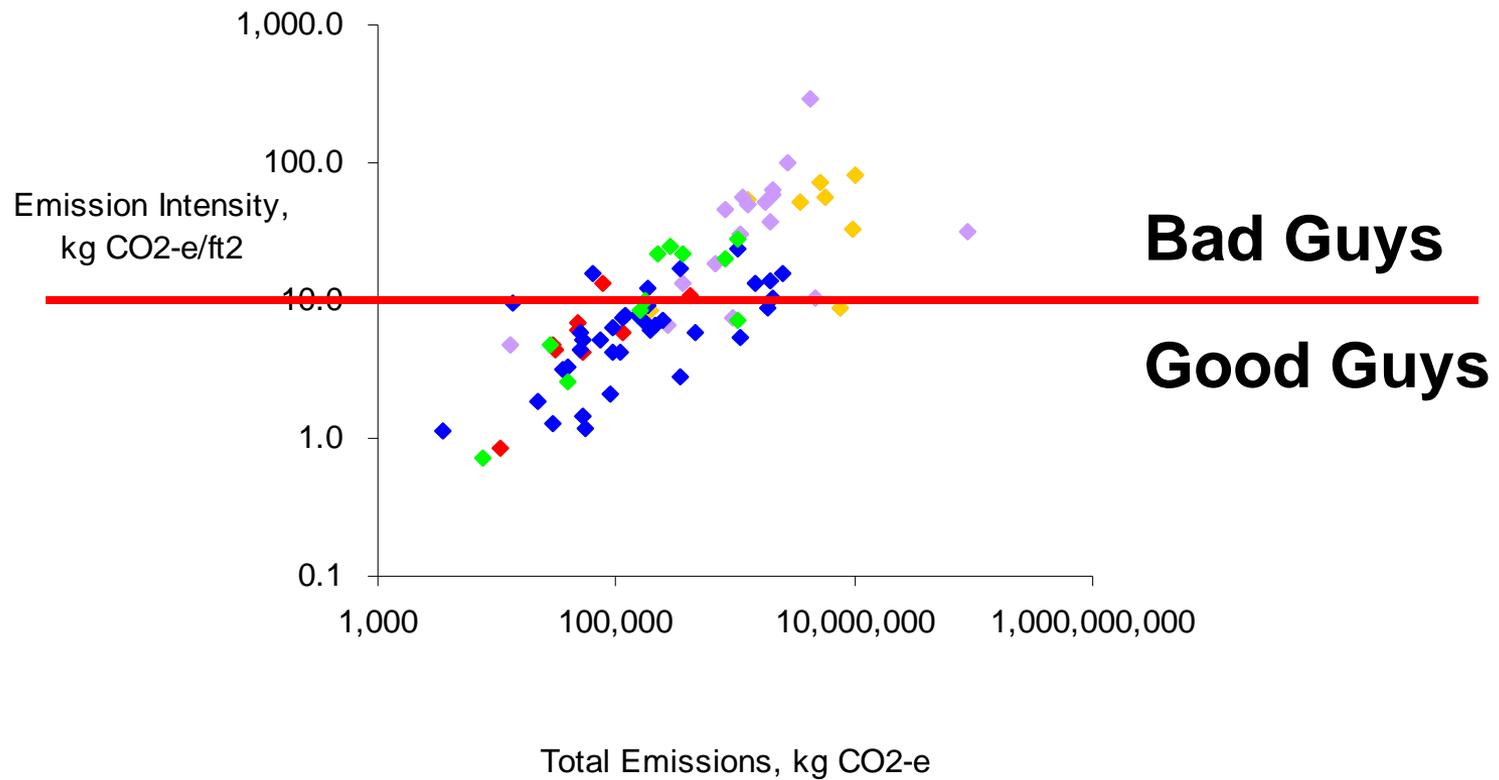
Water use per area



Even within “homogeneous” portfolios, we find significant performance spreads.



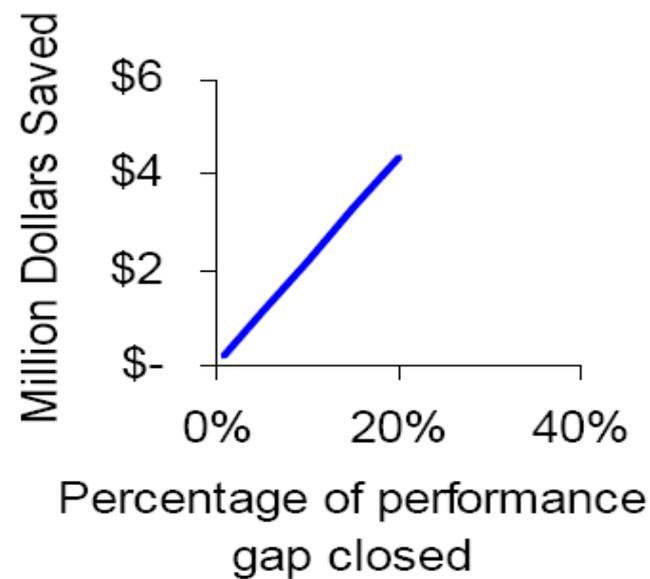
A typical knee jerk reaction of labeling leaders and laggards...



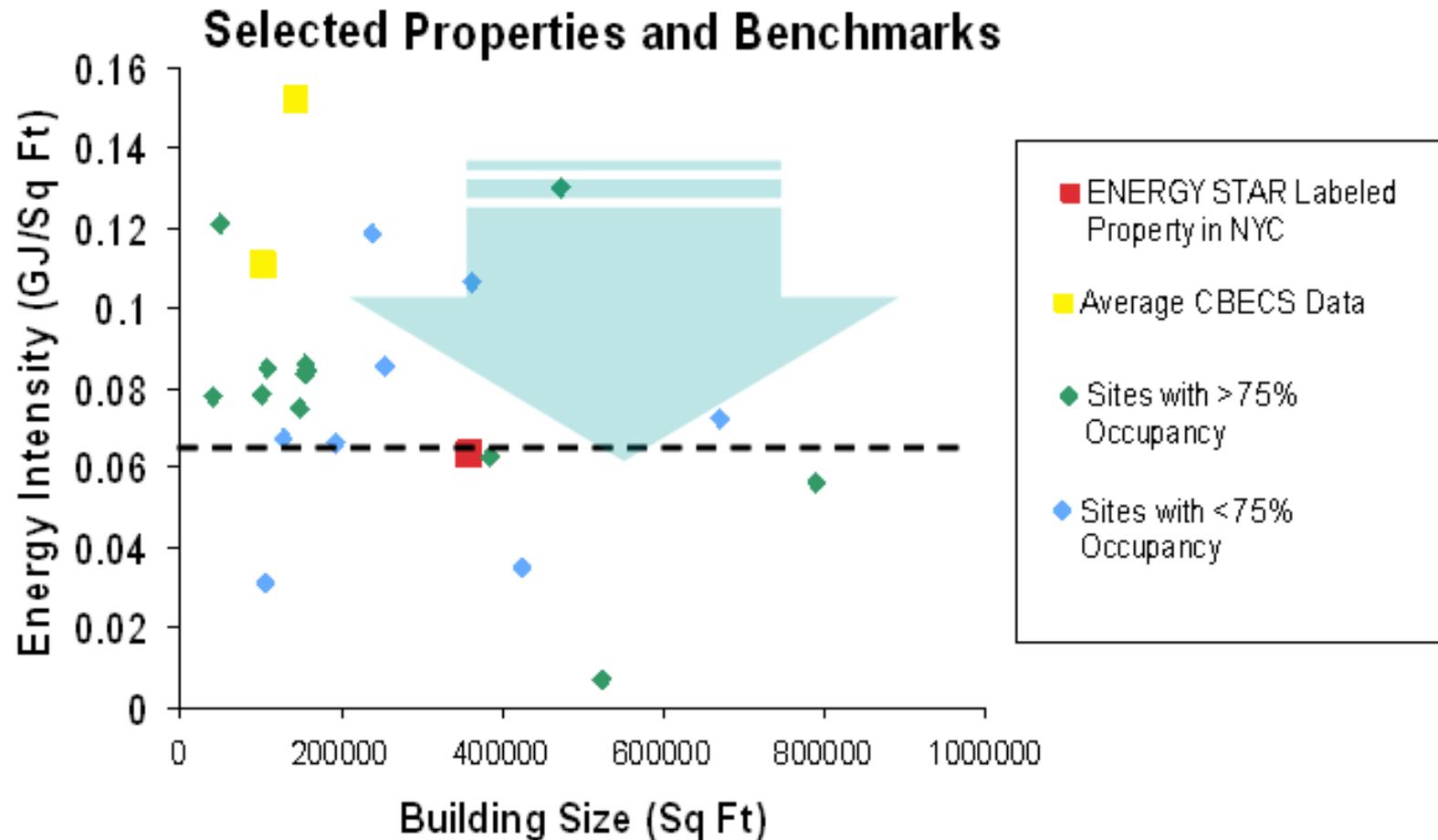
Illustrative

How much can *this* portfolio save?

Percent of Gap Closed	Electricity Savings Potential
1%	\$ 220,001
5%	\$ 1,100,007
10%	\$ 2,200,014
15%	\$ 3,300,021
20%	\$ 4,400,028



Benchmarks Inform a Portfolio-Wide Target



Low Hanging Fruit ("Low Cost / No Cost")

**No attempt to
reduce costs
via supply air
strategies.**

SUPPLY AIR

Options available:

- free cooling
- pre-cooling
- CO₂ control
- CO control
- clean coils
- clean filters

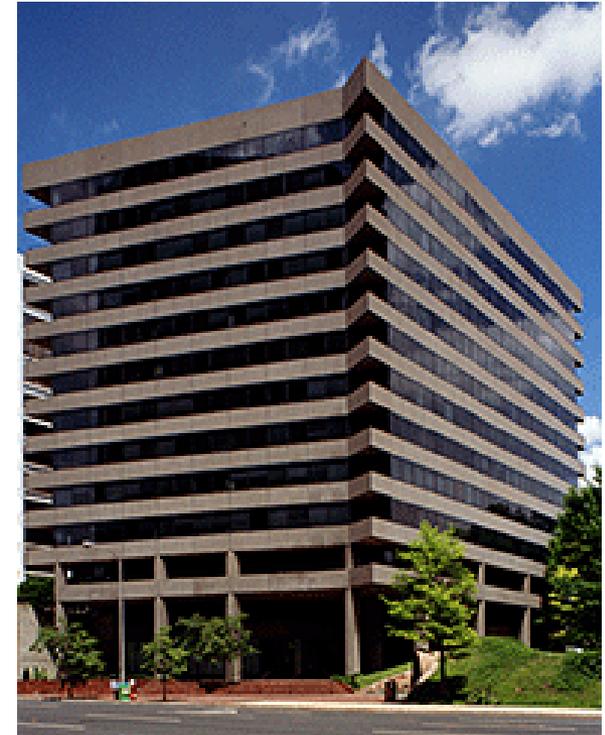
Myth 5: Challenges in Leased Space

Some types of leasing situations present major challenges:

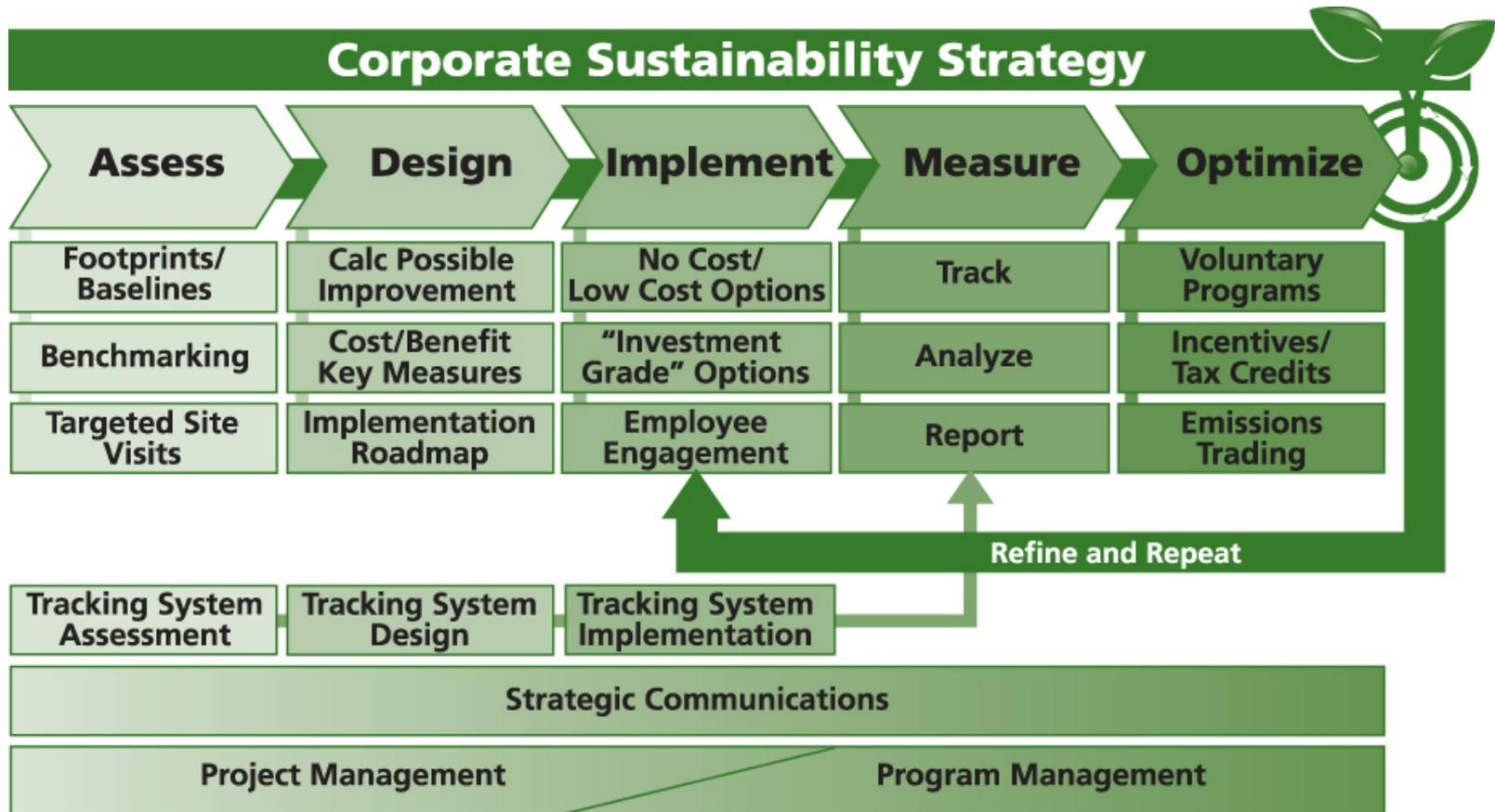
- **The owner or property management firm pays utilities.**
- **Buildings have multiple tenants.**
- **Tenants have little access to utility data.**
- **Leases prevent tenants from making any building modifications.**
- **Tenants have little control over building systems (HVAC, hot water, ventilation).**
- **Tenants have little control over building services (security, cleaning, waste disposal).**

Case study – Tishman Speyer

- Working with building management, ICF identified low and no-cost building-wide energy efficiency opportunities.
- ICF prioritized these opportunities based on up front cost, energy savings potential, and ease of implementation. Increased “shut down” hours, a lighting upgrade, and a transition to day cleaning were identified as the best opportunities.
- ICF and Tishman co-hosted an Earth Day tenant meeting to explain energy saving opportunities and solicit buy-in.
- Tenants overwhelmingly supported energy improvements, which would collectively save the building \$30,000/yr in utility costs.
- Under triple net lease, each tenant benefitted based on their sq. ft at the end of the year.

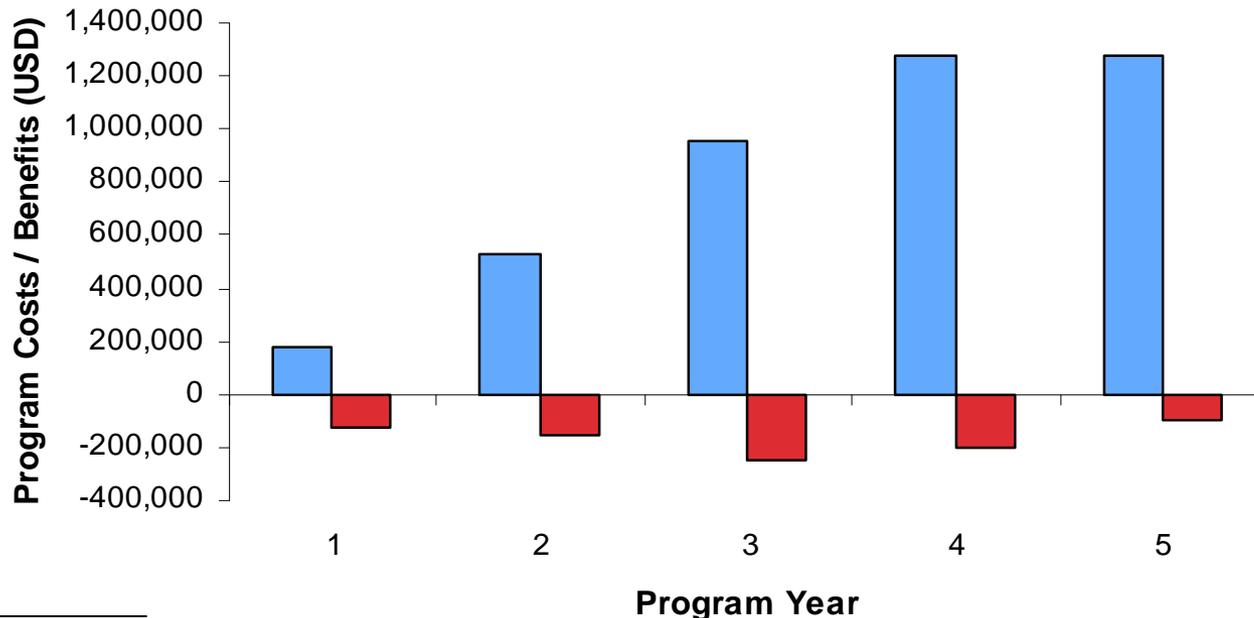


ICF's Corporate Sustainability Solution Framework



Program Business Case

"Pro Forma" Corporate Sustainability Business Case



Illustrative



Key Assumptions:

- Program benefits assume annual performance improvement targets of 2%, 4%, 5%, 4%, and 0%, respectively, per program year (Total = 15%).
- Benefits are represented as annual operational cost savings associated with reduced electricity and natural gas consumption.
- Cost components include: ICF consulting fees, ICF's Do Your Part! employee engagement tools, performance tracking system license fees, and capital costs for "low cost" and "investment grade" building equipment and technology projects.

GovEnergy 2010

Hall of Fame – Who is in the lead?

Company	Goal Achieved	Time Period
Bank of America	On track to reduce CO2 emissions by 9%	2004 to 2009
Baxter International	Reduced energy used and related GHG emissions by 30% per unit product value	1999 to 2005
Deutsche Telekom	Reduced energy consumption by 15%	1995 to 2000
Simon and Schuster	Reduced energy consumption by 15% through no and low cost reduction strategies	2001 to 2005
Xerox	Reduced energy used by 21%	2002 to 2007
Food Lion	Reduced energy used by 27.8%	2003 to 2008
Roanoke County Public Schools	Reduced energy used by 23% portfolio-wide	Ten Years

Thanks

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