



DC Energy Act and ENERGY STAR

December 9, 2008

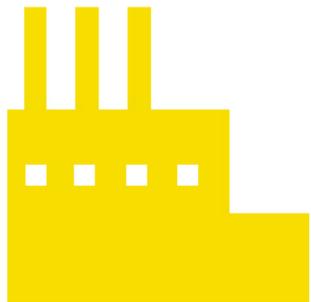
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**WASTE
MANAGEMENT**
7%



TRANSPORTATION
18%

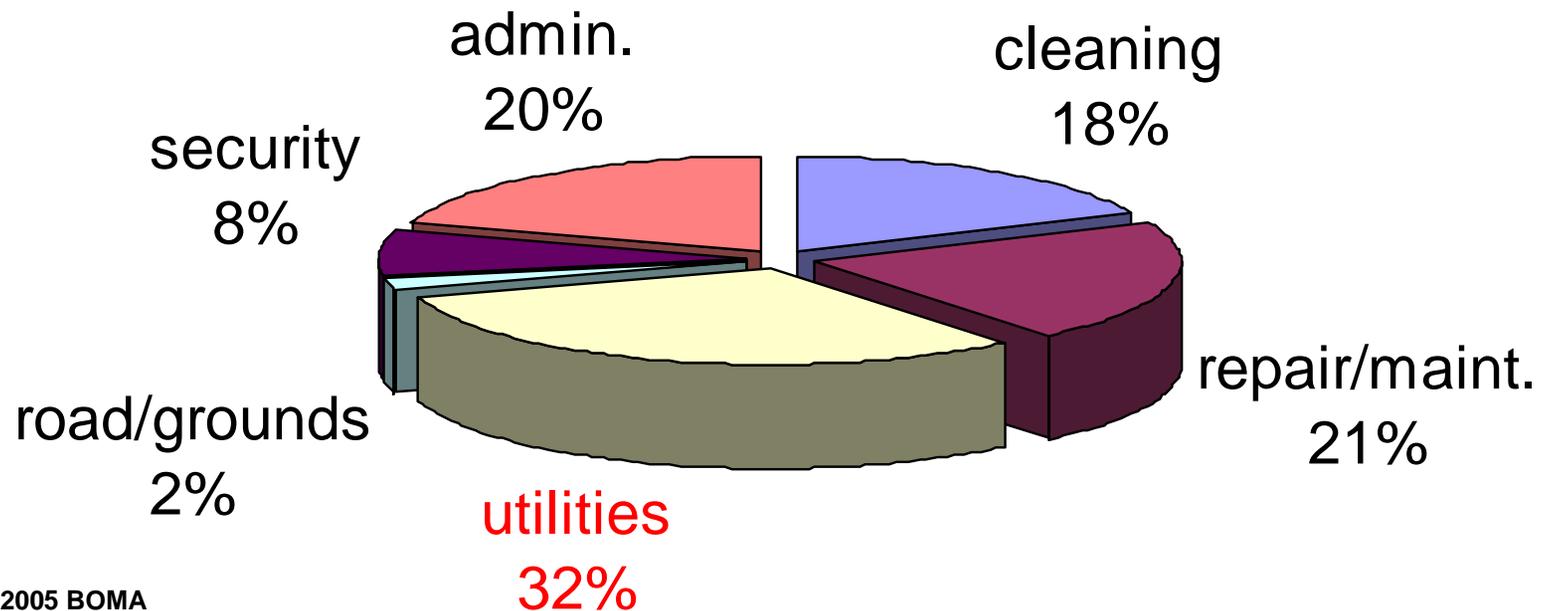


BUILDINGS
75%

DC Greenhouse Gas Emissions

Energy is the largest operating cost for DC Office Buildings

Average Shares of Total Operating Cost,
Downtown Washington Office Building



Source: 2005 BOMA
Experience Exchange Report



The Problem: Market Failures Leading Underinvestment in Efficiency & Renewables

- **Energy consumers don't pay the price for resulting pollution (negative externality)**
- **Inertia and fear of change (human nature)**
- **Those who control energy consumption don't pay for it (split incentives)**
 - **Developers/designers/builders/subs**
 - **Owners vs. tenants**
- **Lack of info (few know how efficient their building is or how cost-effectively they could reduce energy use)**
- **Financing (too hard to finance efficiency and too easy to finance old inefficient plans/buildings)**

Building Certification in Washington, DC

Green Building Act of 2006

- All new government-funded buildings must
 - Earn a ENERGY STAR Target finder score of 75+
 - Be ENERGY STAR benchmarked annually
 - Be certified by US Green Building Council as LEED Silver or better (green building certification)
- Private buildings
 - Building code “greened” in December 2008, including strengthened building-energy-efficiency requirements (ASHRAE 90.1 2007 and “The 30% Solution)
 - Commercial buildings over 50,000 sf built after 2011 must be LEED certified
 - Expedited building permits for green buildings



The Clean and Affordable Energy Act of 2008 (the DC Energy Act)

- **Sponsored by Councilmember Mary Cheh and eight other council members**
- **Unanimously passed by City Council on July 15, 2008**
- **Signed by Mayor Fenty on August 4, 2008**
- **CM Cheh and her staff extensively consulted with broad range of stakeholders in drafting the bill**
- **IMT assisted in design of the Act including the benchmarking provision**



DC Energy Act's Goals

- Reduce per-capita energy consumption
- Increase renewable energy generating capacity
- Reduce the growth in peak power demand (and the risk of blackouts)
- Improve the energy efficiency of low-income housing
- Reduce demand growth for the District's largest energy users
- Foster development of green-collar jobs
- Low-income energy assistance
- Address market failures



DC Energy Bill's Major Provisions

- **Efficiency and renewable programs**
- **Renewable energy portfolio standard (RPS)**
- **Mandates ENERGY STAR benchmarking**
- **Permits sub metering of electricity in non-residential buildings**



ENERGY STAR Benchmarking Requirements

- **Benchmark annually starting as follows:
10/1/2009 – government owned or operated buildings 10k+ square feet (sf)**
- **Private buildings:
12/31/2010 – 200k+ sf
12/31/2011 – 150k+ sf
12/31/2012 – 100k+ sf
12/31/2013 – 50k+ sf**



ENERGY STAR Disclosure Requirements

- Energy Star statement of energy performance to a public online database starting by 12/1/2009 for public buildings and with the 2nd annual disclosure for private buildings (e.g. 1/1/2012 for buildings 200k+ sf)



Requirements for New Construction and Substantial Improvement

- 50k+ sf project that has submitted the 1st permit after 1/1/2012, for new construction or substantial improvement shall, prior to construction, estimate its energy performance using the Energy Star Target Finder and benchmark annually
- public disclosure within 60 days of benchmarking



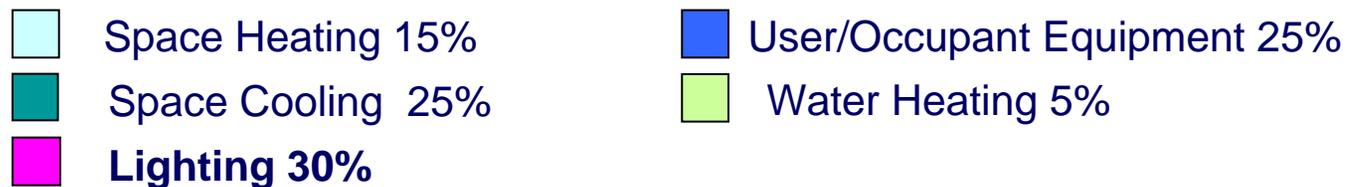
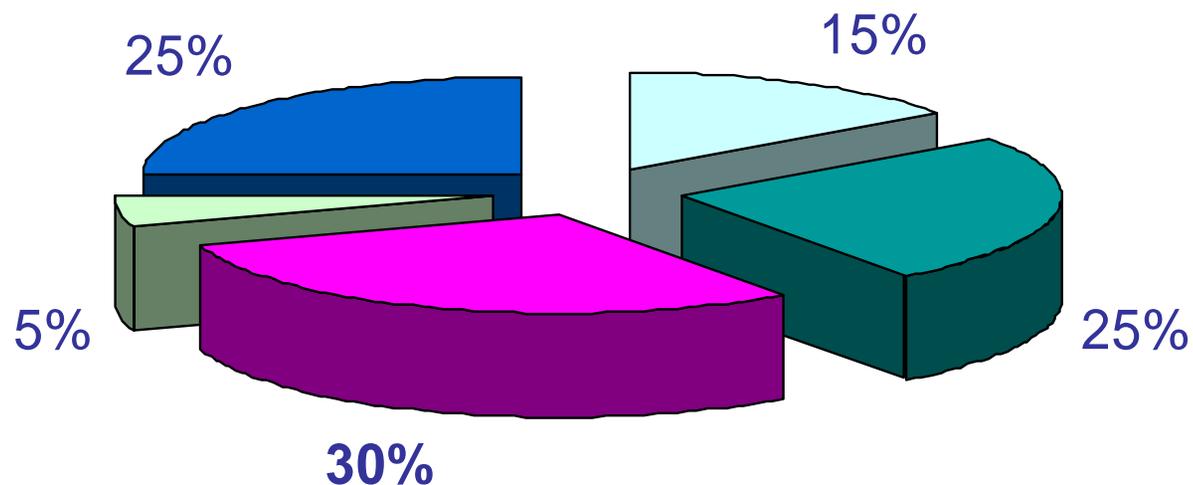
Benchmarking Requirement Will Create Green Jobs

- Louis Berger commissioned in 2008 by DC government to create an economic model to measure current green jobs and predict future green job creation, including due to environmental policies
- Benchmarking requirement is a top driver of green job creation
- It will create more than 1,000 jobs as building owners invest in O&M and retrofits (74.8% of the new jobs are in construction, installation and O&M)

Efficiency and renewable programs

- **Reinvents from the ground up (design, delivery, implementation, oversight)**
- **Creates a Sustainable Energy Trust Fund (SETF) to increase funds for programs**
 - 0.11 cents per kilowatt-hour on electricity sales, increasing to 0.15 cents per kWh after 2011
 - An assessment of 0. of 0.11 cents per therm on natural gas sales, increasing to 0.14 cents per therm after 2011
- **Creates a Sustainable Energy Utility (SEU)**
 - A 3rd party selected by RFP to a 5+ year contract
 - Structured to focus on customers and results and be entrepreneurial and nimble with short and long-term goals
 - A one-stop shop
- **Fast-track review of PEPCO programs**

Typical Energy Uses in DC Office Buildings



Source: Transwestern Commercial Services

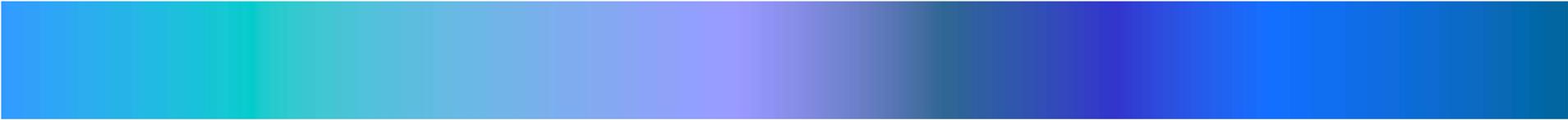
Even in existing buildings, typical ROIs from efficiency are anything but typical

On average each \$1 invested in energy performance retrofits increases asset value by \$2 to \$3

(Assumes a 10% cap rate)



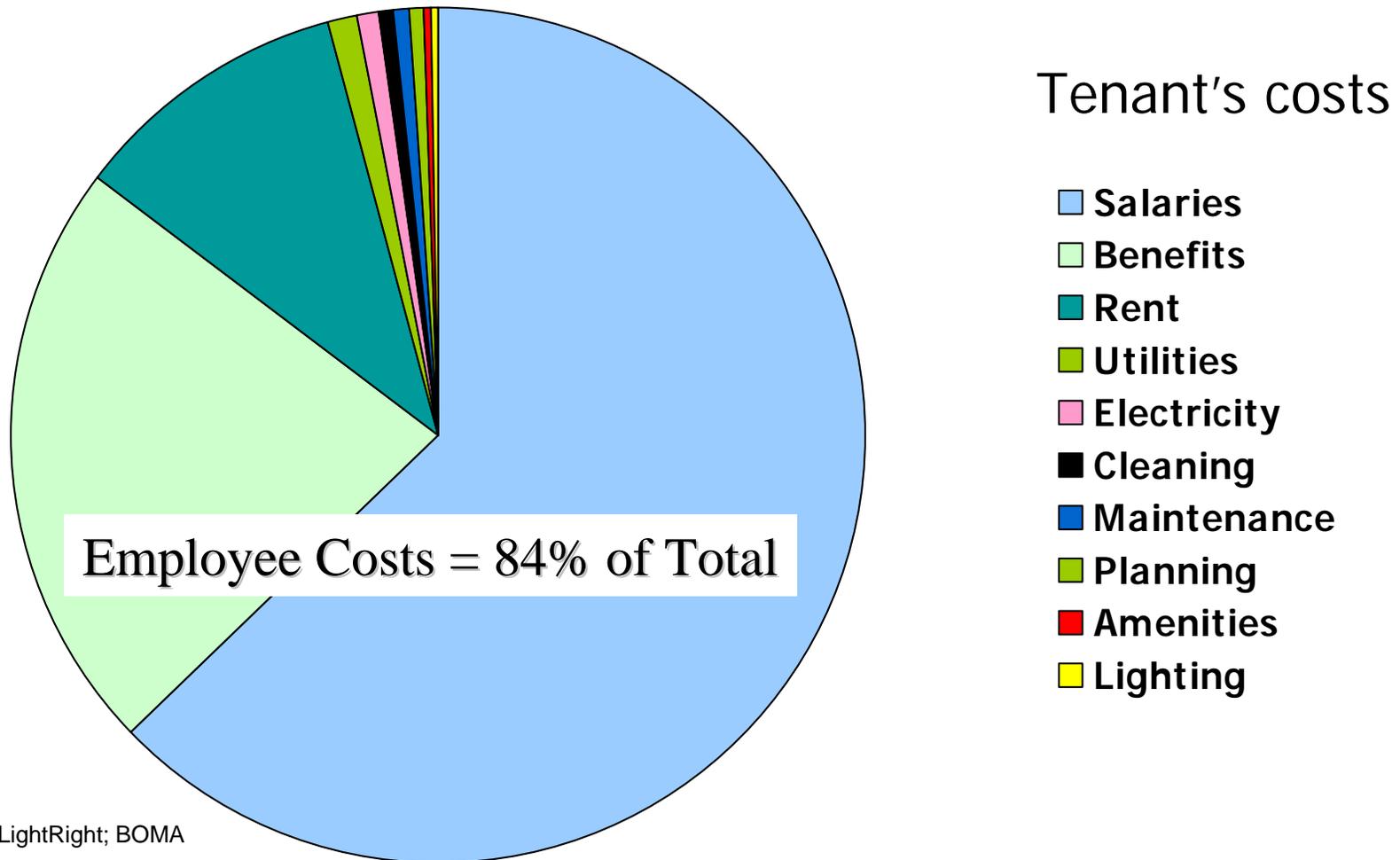
Source: ENERGY STAR research



Owners Can Profit from Efficiency Even With Triple-Net Leases

- Triple net and modified gross leases make it more difficult for owners to realize NOI and property value increases from efficiency investments
 - Smart tenants track total occupancy cost, not just rent
 - Tenants often willing to use their energy cost savings to finance efficiency
 - “Tenant Cost Recovery” lease terms can help
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The Office Tenant's Perspective



Source – LightRight; BOMA