

Verigreen
ENERGY & LIGHT
SOLUTIONS



Loudoun's Green Business Challenge

“Finding Green To Go Green”

Why Spend Green to Go Green?

- Technology has improved & prices have fallen - <2 year payback
- Tax incentives and deductions available through 12/2013
- Government regulations will require it anyway – Energy Star

Year	MM Fund (2.5%)	Stock market (8%)	Energy Conservation
2009	\$ 100,000	\$ 100,000	\$0
2010	\$ 102,500	\$ 108,000	\$ 30,000
2011	\$ 105,063	\$ 116,640	\$ 60,600
2012	\$ 107,689	\$ 125,971	\$ 91,812
2013	\$ 110,381	\$ 136,049	\$ 123,648
2014	\$ 113,141	\$ 146,933	\$ 156,121
2015	\$ 115,969	\$ 158,687	\$ 189,244
2016	\$ 118,869	\$ 171,382	\$ 223,029
2017	\$ 121,840	\$ 185,093	\$ 257,489
2018	\$ 124,886	\$ 199,900	\$ 292,639

Energy Star and the Bottom Line

An analysis of office buildings that have earned the Energy Star label show that they cost \$1.20 per sq ft to operate, compared with an average U.S. office building that operates at about \$2.00 per sq ft.

- ***Savings of \$160,000/year for 200,000 ft² office building***

Most packaged Energy Upgrades will have a simple payback of 4-6 years for the investment cost

- ***Equivalent to a 20% IRR***





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Asset Valuation Benefit

Lower energy consumption yields higher net operating income

✓ If the market recognizes an increased NOI from persistent energy cost savings at a capitalization rate of 8.0%, a \$0.50 per sq. ft. annual reduction in energy cost would result in asset valuation increase of \$6.25 per sq. ft. (Example: A savings of \$0.50 per sq. ft. will result in an increased value of \$625,000 for every 100,000 sq. ft.)

How to Finance Going Green

- ✓ EPACT 2005 – extended to Dec. 2013
- ✓ Grants
- ✓ ESCOs – Energy Service Company
- ✓ Utility Company Programs - Dominion
- ✓ Engineering-Based Cost Segregation



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Energy Policy Act 2005 – EPACT 2005 Commercial Building Tax Deductions

Building System (ASHRAE 2001 standards)	Energy Reduction Required	Tax Deduction
Lighting	25% - 40% 50%+ warehouses	\$.30 to \$.60 per sf
HVAC & Hot Water Heaters	20%	\$.60 per sf
Envelop – Roof, Windows, Doors, etc.	10%	\$.60 per sf

Parking Garages, Retailers, Warehouses, Manufacturing, etc.

LEED projects must achieve ASHRAE 2004 building standards

Interim Lighting Rule

- ✓ Achieve a reduction of at least 25% over maximum levels in ASHRAE 90.1-2001 (compared with equipment in new buildings and not existing system)
- ✓ Controls that comply with Mandatory Provisions of ASHRAE 90.1-2001
- ✓ Bi-Level Switching
- ✓ On-site inspection to verify installation and perform light level measurements

Finding Green & Incentives

- ✓ www.grants.gov
- ✓ <http://www1.eere.energy.gov/financing/>
- ✓ www.eere.energy.gov/state_energy_program
- ✓ <http://www.dsireusa.org/incentives/index.cfm?State=US&ee=1&re=1>
- ✓ www.energystar.gov
- ✓ Commercial Building Tax Deduction Coalition
www.efficientbuildings.org
- ✓ NEMA (National Electrical Manufacturers) Lighting Deduction Website
www.lightingtaxdeduction.org



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Retail Case Study

Adopting High Efficiency Lighting Technology

7000sf Retail/Warehouse (Retrofitted 79 Fluorescent Fixtures)

- 42,200 kilowatt savings/year
- \$9,400 total energy/maintenance cost avoidance savings/year
- \$13,000 project cost
- \$4,200 tax deduction (\$.60 per sf)
- \$110,000 operational savings over 10 years

Financing Options

- Operating Lease/Bank Loan – Cash Flow Positive Day One
- Capital Investment – Breakeven in 1.3 years, over 45% IRR
- Performance Contract – No cost and guaranteed 50% energy savings
- Cost Segregation – Yields tax savings of \$100,000+ over next 5 years



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Energy Upgrade ROI

All ECMs and WCMs: \$638,000 Cost \$186,000 Savings

Self Financed: 90% Building Improvement Loan, 15 years, 8% interest

- payments to loan \$5,500/month
- Savings on energy bill \$15,500/month
- ***\$10,000 reduced expenses/month from start of project***

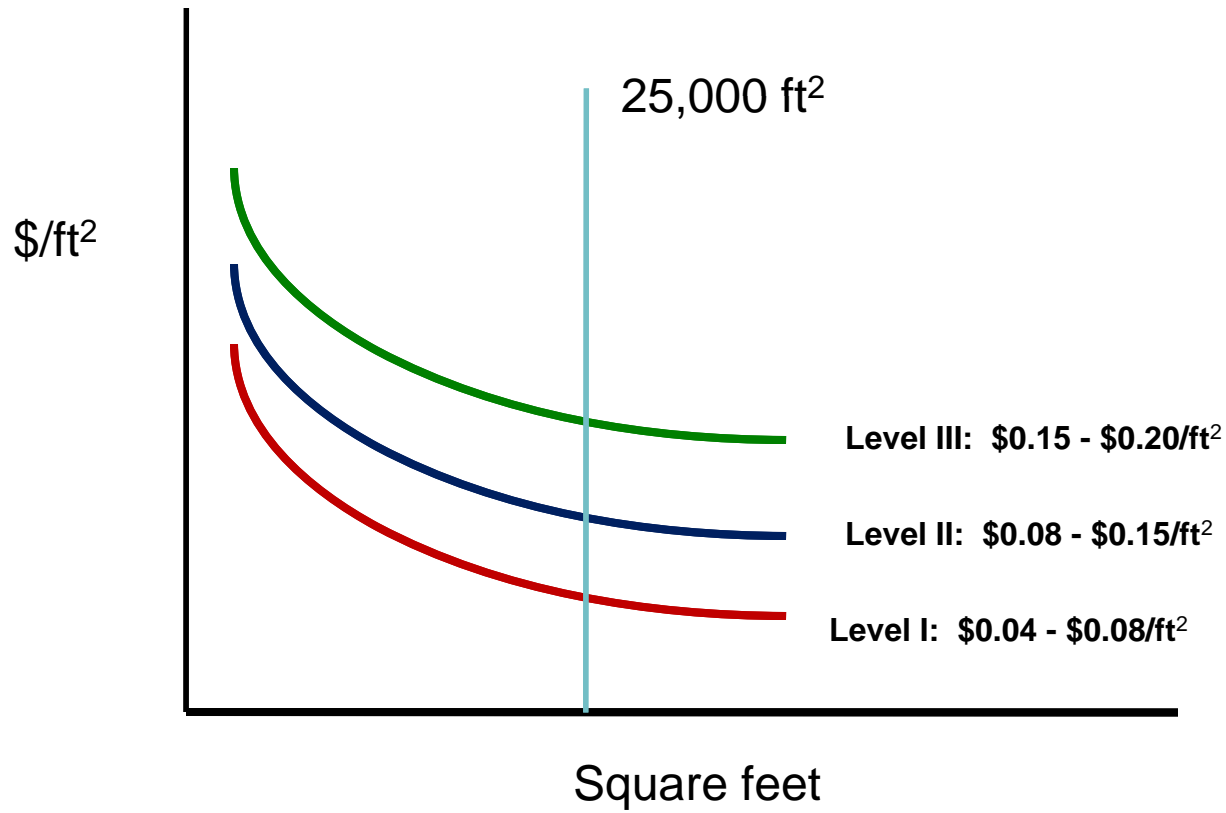
ESPC: Third party financing and installation

- payments to ESCO \$7,750/month
- Savings on energy bill \$15,500/month
- ***\$7,750 reduced expenses/month from start of project***



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Costs of an Energy Audit



Recommended Action Steps

- ✓ Verify current performance
- ✓ Schedule facility evaluation to identify energy conservation opportunities
- ✓ Initiate one project this summer