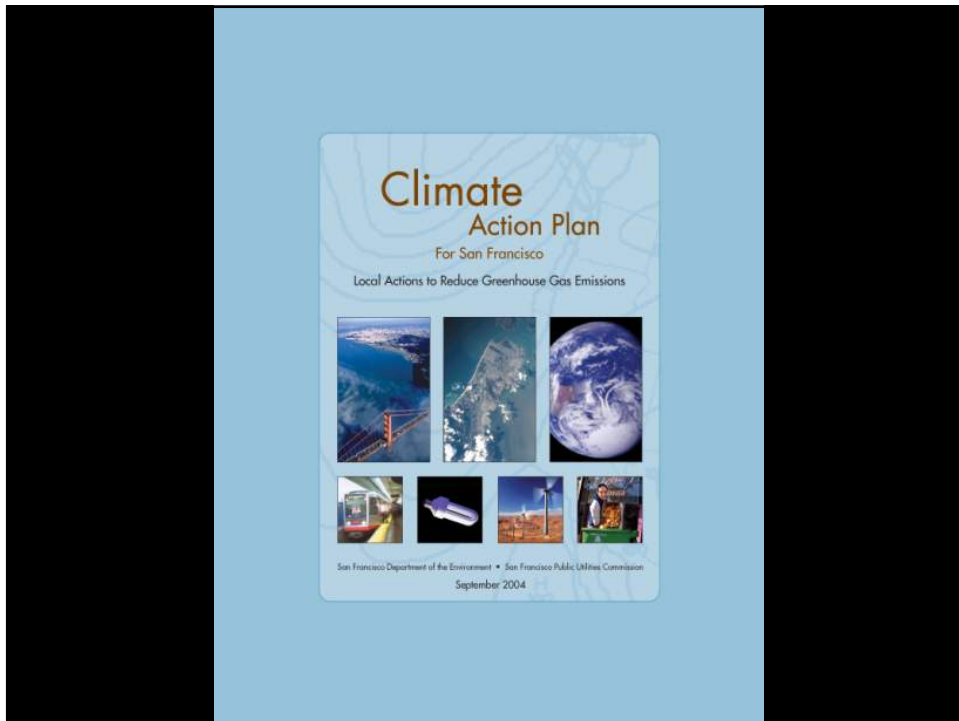


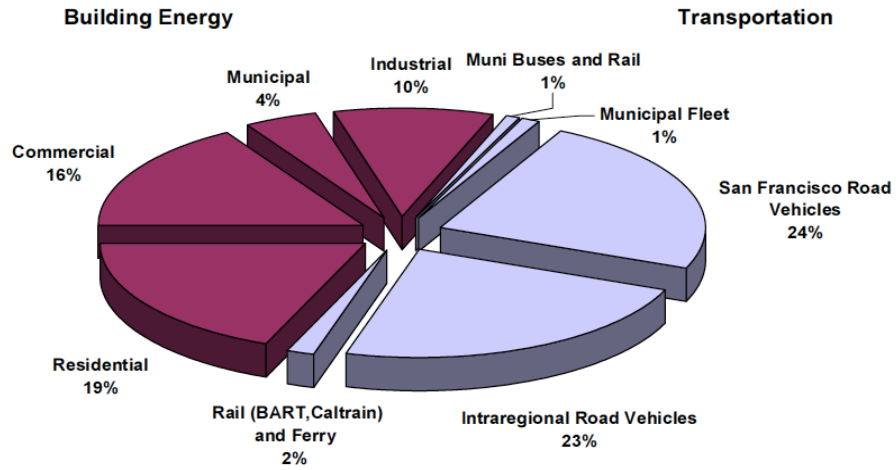
Green Building in San Francisco Policy and Programs Update

**IFMA San Francisco
April 14, 2011**

**Rich Chien
Private Sector Green Building Coordinator
GreenFinanceSF Program Manager
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415-355-3761**

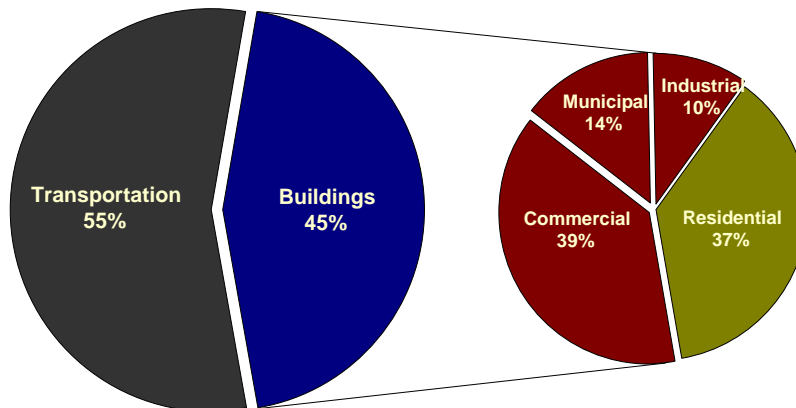


SF Carbon Footprint



Sources: PG&E, Hetch Hetchy Water and Power, CA. Dept of Transportation, MTC, Muni, BART.

SF Carbon Footprint - Buildings



Sources: PG&E, Hetch Hetchy Water and Power, CA. Dept of Transportation, MTC, Muni, BART.

Leading by Example



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The Mayor's Task Force on Green Building For the City and County of San Francisco



REPORT AND RECOMMENDATIONS

June 2007

Scope


- Commercial & Residential
- New Construction


Composition

- Owners
- Developers
- Financial
- Architects
- Engineers
- Contractors

Emphasis

- Predictability
- Substantive requirements
- Design Flexibility

 2008 Green Building Requirements					
	2008	2009	Current	2011	2012
New Commercial					
Large ≥ 25k ft	LEED Certified	LEED Silver			LEED Gold
Mid-Size 5k – 25k sq ft	LEED checklist + Local Priority Measures				
New Residential					
High Rise ≥ 75' height	LEED Certified		LEED Silver		
Midsized 5+ units	GreenPoints Checklist	25 GreenPoints	GreenPoint Rated	GreenPoint Rated - 75 Points	
Small ≤4 units	GreenPoints Checklist	25 GreenPoints	GreenPoint Rated		GreenPoint Rated - 75 Pts
Renovations					
First Time Tenant >25k sq ft	LEED Certified	LEED Silver			LEED Gold
Major Alteration >25k sq ft	LEED Certified	LEED Silver			LEED Gold

 2011 Green Building Requirements					
	2008	2009	2010	2011	2012
New Commercial					
Large ≥ 25k ft	LEED Certified	LEED Silver		LEED Silver + 8 CALGreen measures	LEED Gold + 8 CALGreen measures
Mid-Size 5k – 25k sq ft	LEED checklist + Local Priority Measures			CALGreen/LEED & 15% Title 24 2008	
Small & Other <5k or Other	None			CALGreen & 15% Title 24 2008	
New Residential					
High Rise ≥ 75' height	LEED Certified		LEED Silver		
Midsized 5+ units	GreenPoints Checklist	25 GreenPoints	GreenPoint Rated	GreenPoint Rated - 75 Points	
Small ≤4 units	GreenPoints Checklist	25 GreenPoints	GreenPoint Rated		GreenPoint Rated - 75 Pts
Renovations					
First Time TI >25k sq ft	LEED Certified	LEED Silver			LEED Gold
Major Alteration >25k sq ft	LEED Certified	LEED Silver			LEED Gold

Historic Preservation

Goals

- Preserve historic resources
- Retain embodied energy

Mechanism

- Preservation reduces LEED requirement
- Demolition increases LEED requirement



SUMMARY

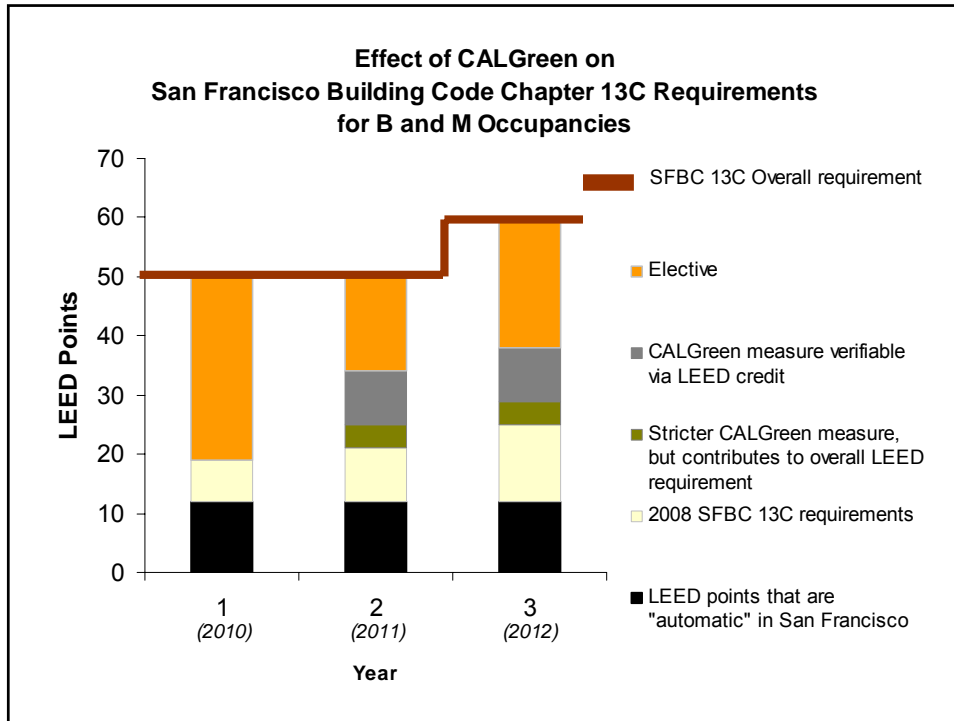


Green Building Ordinance: Summary of Requirements
Table 1: Summary of Green Building Requirements

Attachment A
Table 1

Building Type	New Construction				Interiors and Major Alterations		
	New Large Commercial	All Other New Non-Residential	New High-Rise Residential	All Other New Residential	Large First-Time Commercial Interiors	Major Alterations to Commercial	Major Alterations to Residential
Occupancy and Size	A, B, I, M ≥25,000 sq. ft.	E, F, H, L, S, U any size, or A, B, I, M <25,000 sq. ft.	R 5+ units and ≥ 75' height to highest occupied floor	R 1+ units and < 75' height to highest occupied floor	A, B, I, M ≥ 25,000 sq. ft.	B, M >25,000 sq. ft.	R >25,000 sq. ft.
Code Reference	13C.5.103.1	13C.5.103.2	13C.4.103.2	13C.4.103.1	13C.5.103.4	13C.5.103.3	13C.4.103.3
Recommended Submittal Form Template required to summarize compliance with requirements	"LEED"	"Specific Local Measures Only"	"LEED" or "GPR"	"GPR"	"LEED"	"LEED"	"LEED" or "GPR"
Standard To Be Met	2011: LEED Silver 2012: LEED Gold	None	LEED Silver, or GreenPoint Rated	GreenPoint Rated	2011: LEED Silver 2012: LEED Gold	2011: LEED Silver 2012: LEED Gold	LEED Silver or GreenPoint Rated
Base Number of Points Required Retention of historic features or demolition may adjust points required. See Attachment A, Tables 2 & 3	2011: 50 points 2012: 60 points	-	LEED: 50 points GPR: 75 points	GreenPoint Rated 75 points	2011: 50 points 2012: 60 points	2011: 50 points 2012: 60 points	LEED: 50 points GPR: 75 points
	See Table B1 for additional specific local requirements, including 2010 California Green Building Standards Code measures and stricter local requirements.						

Administrative Bulletin AB-093 and all other green building forms at: www.sfgov.org/dbi
under "Administrative Bulletins"



Existing Buildings - Programs

SF Energy Watch: delivered 6 MW energy efficiency savings (~ 6,000+ homes)

SF Green Business Program: www.sfgreenbiz.org

GoSolarSF: 3.8 MW of solar power installed or in progress from 1100 applications (38 new jobs)

SFPUC Water Conservation Program: ~500M gallons saved through 13,500 fixture rebates and 60,000 free water-saving devices; 1,200 Water-Wise evaluations



Existing Buildings - Policies

2009 Water Conservation Ordinance (SFPUC)

- Housing and building code amendments require retrofitting with water efficient fixtures and repairing leaks.
- Residential properties are required to be retrofitted upon resale.
- All commercial buildings must be retrofitted by 2017.

2010 Lighting Performance Ordinance

- 81 lumens/watt for common linear fluorescents, ≤ 5 mg of mercury for 4' tubes, or 10 mg for 8' tubes by 12/31/11.

2011 Existing Commercial Buildings Energy Performance Ordinance

- Mandatory annual benchmarking and reporting with ESPM (non-res)
- Mandatory audits (>10K SF)

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Existing Commercial Buildings Energy Performance Ordinance

Audit Schedule

	Up to 4 months After Approval	Year 1 (12 mo. later)	Year 2	Year 3
Identify Cost-effective Savings	Notify all building owners.	33% of buildings obtain an energy audit*	Second 33% *	Final 33% *

...100% have clear plan for energy savings

* once every 5 years after initial audit

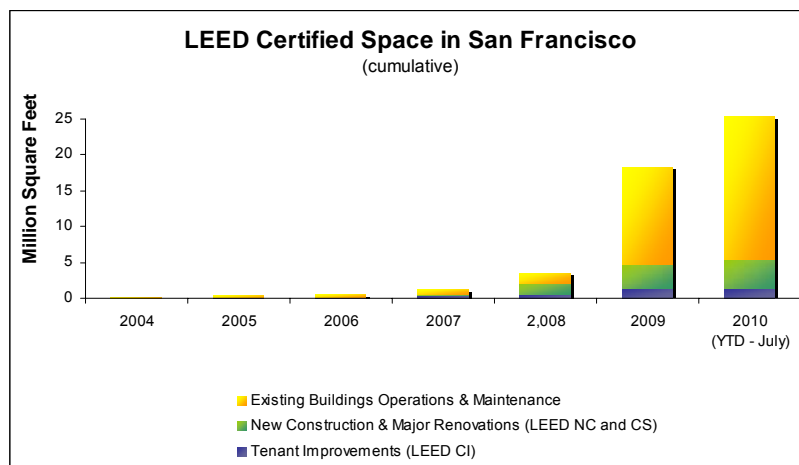
Benchmarking Schedule

	Passage of Ordinance	2011	2012	2013	2014
Energy Benchmark and Disclosure	Outreach Early action	Benchmark >50K sq ft	Benchmark >25K sq ft	Benchmark >10K sq ft	Continue

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S.F. Green Building Market



PACE: Simple Effective Tool



GreenFinanceSF

Website: A one-stop shop w/ homeowner education, contractor information, and online application process. All visitors in a 3 month period.

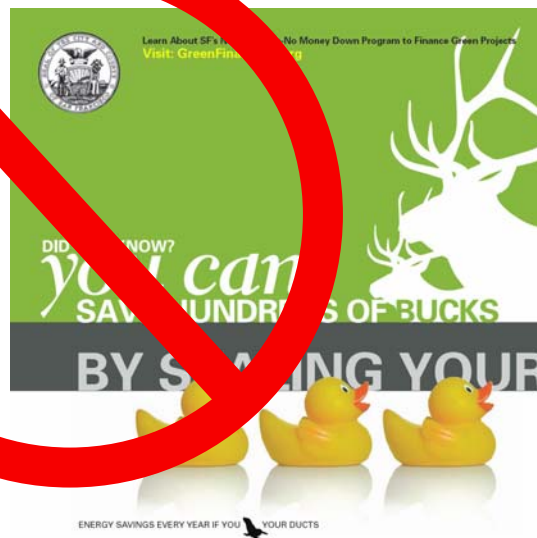
Targeted Outreach: Contacted 40,000 targeted homeowners via mailers and robo-calls.

Internet Town Hall: Internet Town Hall w/Mayor News on day of launch.

Community Events: 2 community outreach events in a 2-month period.

Projects (April 12-June 12, 2010)

- 130 applications submitted
- 20 active applications
- 13 others denied or withdrawn
- \$862,120 total requested
- \$26,125 average request


















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EUC – Commercial PACE Pilots

- Leverage \$30 million in ARRA SEP Municipal and Commercial Building Targeted Measure Retrofit Programs
- PACE commercial financing pilot programs in **City of Los Angeles, Placer County, and San Francisco**, in partnership with the Clinton Climate Initiative.
- Replicability plan for statewide scaling (best practices, template documents, etc.)
- Coordination with future commercial rebate programs, on-bill financing, financing section of EUC web portal.

Three Financing Pathways

Pathway	Description
Pooled Bond	PACE applications are aggregated, and a revenue bond is issued to fund proposed projects
Stand-Alone Bond	For sufficiently large projects, a revenue bond is issued to fund an individual (or small number of) projects
Owner-Arranged Bond	An owner arranges project financing with a private lender and the lender accepts PACE securitization and payback framework

Commercial PACE Financing Potential

\$2.5-\$7.5 billion annually by 2015*

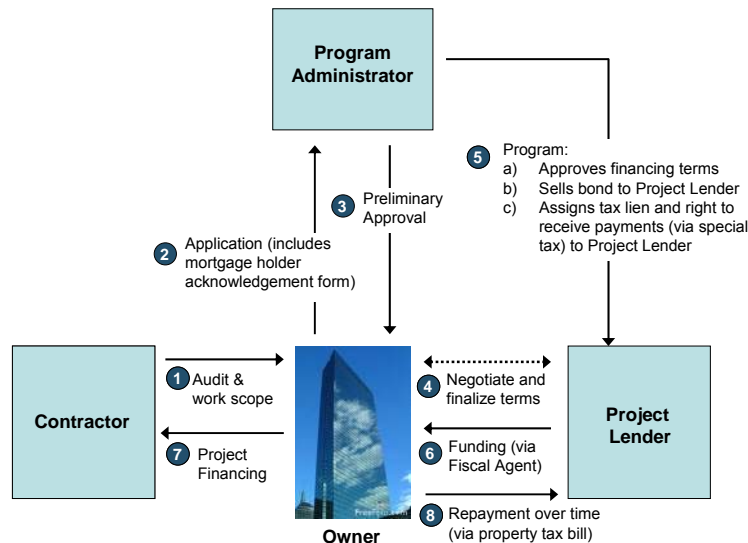
\$88-180 billion opportunity in large commercial buildings alone**

www.pikeresearch.com/newsroom/u-s-energy-service-company-market-to-increase-250-by-2020

**Financing Retrofits in Large Commercial Buildings Through PACE Loans, Clinton Climate Initiative, February 2010

<http://www.eere.energy.gov/>

Owner Arranged Process Flow (general)



Application

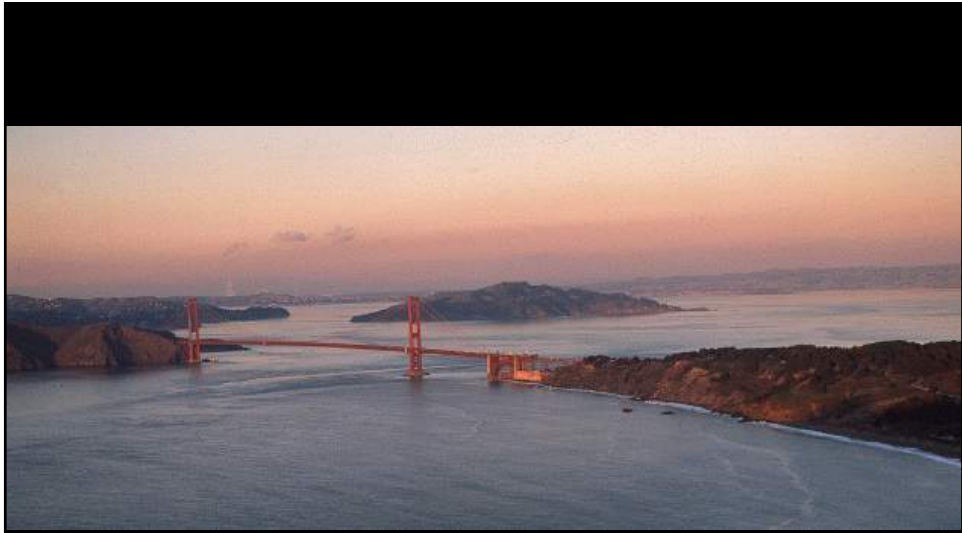
- Application package to require:
 - Application form
 - Mortgage holder acknowledgment form
 - Program terms and disclosures
 - Energy audit results
 - Project financial analysis (template provided)
 - Bid estimates
- Available early summer 2011

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Commercial Open Issues

- OCC, other regulatory unknowns
- Mortgage holder acknowledgment/consent
- DSRF amounts
- AB X1-14 and AB 1054
- Program administration costs
- Progress payments/multiple disbursements
- Audit requirement, eligible measures, M+V
- Overall demand

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Thank You!