



Photos by Nic Lehoux

Sustainable Buildings & Sites Policy

Seattle Design Commission

July 19, 2012

Sandra Mallory, Sustainable Buildings Program Manager
Office of Sustainability & Environment



2000 Sustainable Building Policy

- *demonstrate the City's commitment*
- *yield cost savings to the City taxpayers*
- *provide healthy work environments*
- *contribute to the City's environmental goals*

Buildings over **5,000 square feet** meet a minimum **LEED Silver** rating

Photo by Benjamin Drummand



Photos courtesy of Mithun



Photo by Pragnesh Parki





2000 Sustainable Building Policy Successes: Expertise / Quality

year completed

2002	FISHER PAVILION	Seattle Center	certified
2002	SEATTLE JUSTICE CENTER	FAS	silver
2003	MCCAOW HALL	Seattle Center	no rating
2003	SOUTHWEST PRECINCT	FAS	no rating
2003	CARKEEK PARK ELC	Parks	gold
2004	SEATTLE CENTRAL LIBRARY	SPL	silver
2004	CEDAR RIVER TREATMENT FACILITY	SPU	gold
2004	PARK 90/5A - Airport Way Center	FAS	silver
2004	PARK 90/5C - Airport Way Center	FAS	gold
2004	HIGHPOINT COMMUNITY CENTER	Parks	certified
2005	YESLER COMMUNITY CENTER	Parks	gold
2006	NORTHGATE CIVIC CENTER	Parks	gold
2006	ZOOMAZIUM	Woodland Park Zoo	gold
2006	NORTH CASCADES ELC	SCL	silver
2006	SEATTLE JOINT TRAINING FACILITY	FAS	silver
2007	SEATTLE CITY HALL	FAS	gold
2007	MONTLAKE COMMUNITY CENTER	Parks	gold
2007	OPERATIONS & CONTROL CENTER	SPU	gold
2008	FIFTH AVENUE GARAGE	Seattle Center	gold
2008	FIRESTATION 10	FAS	silver
2009	FIRESTATION 28	FAS	gold
2010	WEST ENTRY	Woodland Park Zoo	gold
2010	FIRESTATION 17	FAS	silver
2010	FIRESTATION 35	FAS	gold
2010	FIRESTATION 39	FAS	gold
2010	FIRESTATION 37	FAS	gold
2011	FIRESTATION 30	FAS	gold
2012	FIRESTATION 38	FAS	gold





2000 Sustainable Building Policy Successes: Environmental Impact

Total Environmental Benefits of 25 City of Seattle LEED Projects certified 2003 – 2011

Annual Projected Energy Savings <i>(compared to LEED baseline, ASHRAE 90.1)*</i>	53,926,600 kBtu/yr 29 kBtu/SF/yr
Annual Projected CO2 Emission Reduction <i>(resulting from energy savings)</i>	14,540,500 lbs/yr
Annual Projected Potable Water Savings	4,643,300 gallons/yr
Annual Projected Stormwater Reduction	1,193,176 gallons/yr
Construction Waste Diverted	51,933 tons
Bike Parking Spaces Added	171
Number of Showers Added	88

**ASHRAE 90.1 is a national standard against which all LEED projects are compared. The Seattle Energy Code is more stringent than ASHRAE 90.1, therefore relative savings against the SEC would be less.*

Photo by Michael Burns



Photo by William Wright



Photo by Francis Zera





2000 Sustainable Building Policy Successes: Environmental Impact

*Performance Evaluation Report.
Paladino & Company Inc., 2008*

Justice Center

City Hall

Yearly Energy Savings

26%

17%

Regulated Loads

Compared to Seattle Energy Code baseline

Yearly Water Savings

46%

40%

Per FTE. Compared to Public Safety Building

Yearly Utility Savings

\$113,400

\$58,400

Initial Utility Rebates

\$423,070

\$420,160

Photos by Christian Richters





2000 Sustainable Building Policy Successes: Departmental Initiatives

Category	E	Energy
Intent	1	Reduce Energy Consumption in Building Operations
Objective	4	Reduce Energy Load by Increasing Equipment Efficiency
Strategy	A	Use efficient gas heating equipment

Small Projects

Tenant Improvements

Infrastructure Replacement

Capital Green

Finance and Administrative Services

Strategy Performance Standard

Project strategies should not fall below baseline. Target is a benchmark to strive for. Provide feedback at project completion on level achieved or why strategy was not achievable.

	Baseline	Target
Small Projects	Exceed by 5% Annual Fuel Utilization Efficiency (AFUE) required by current Seattle Energy Code	Exceed Seattle Energy Code by 20% by using gas condensing units
Tenant Improvements	Exceed by 5% Annual Fuel Utilization Efficiency (AFUE) required by current Seattle Energy Code	Exceed Seattle Energy Code by 20% by using gas condensing units
Infrastructure Replacement	Exceed by 5% Annual Fuel Utilization Efficiency (AFUE) required by current Seattle Energy Code	Exceed Seattle Energy Code by 20% by using gas condensing units & size units to optimize efficiency

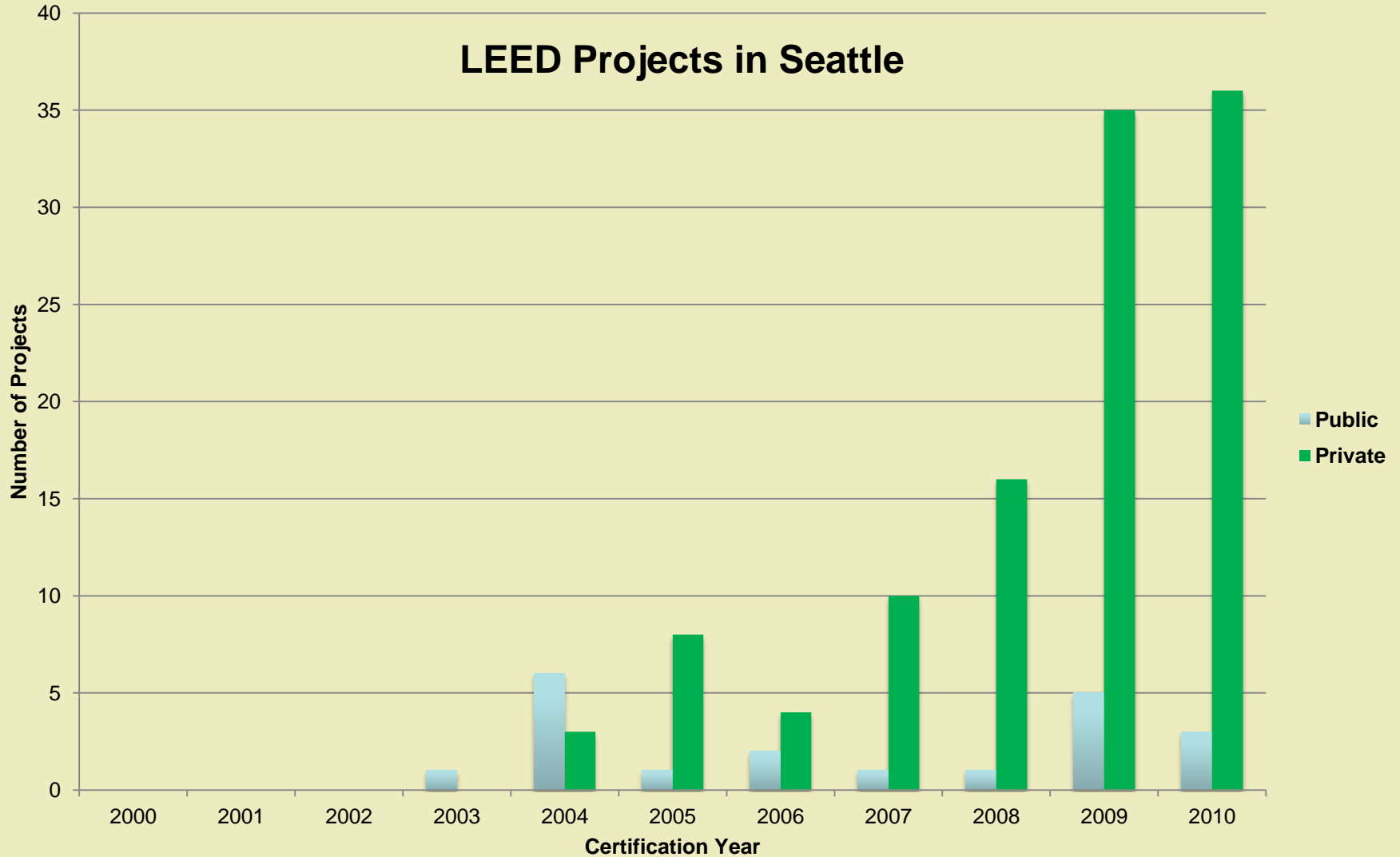
Phase Check if the strategy was pursued during each phase of the project.

Pre-Design Schematic Design Design Development Construction Documents

Scope HVAC	Operational Impact ✓	Implementation Cost \$ Difficulty ★ Environmental Benefit 🌍🌍🌍
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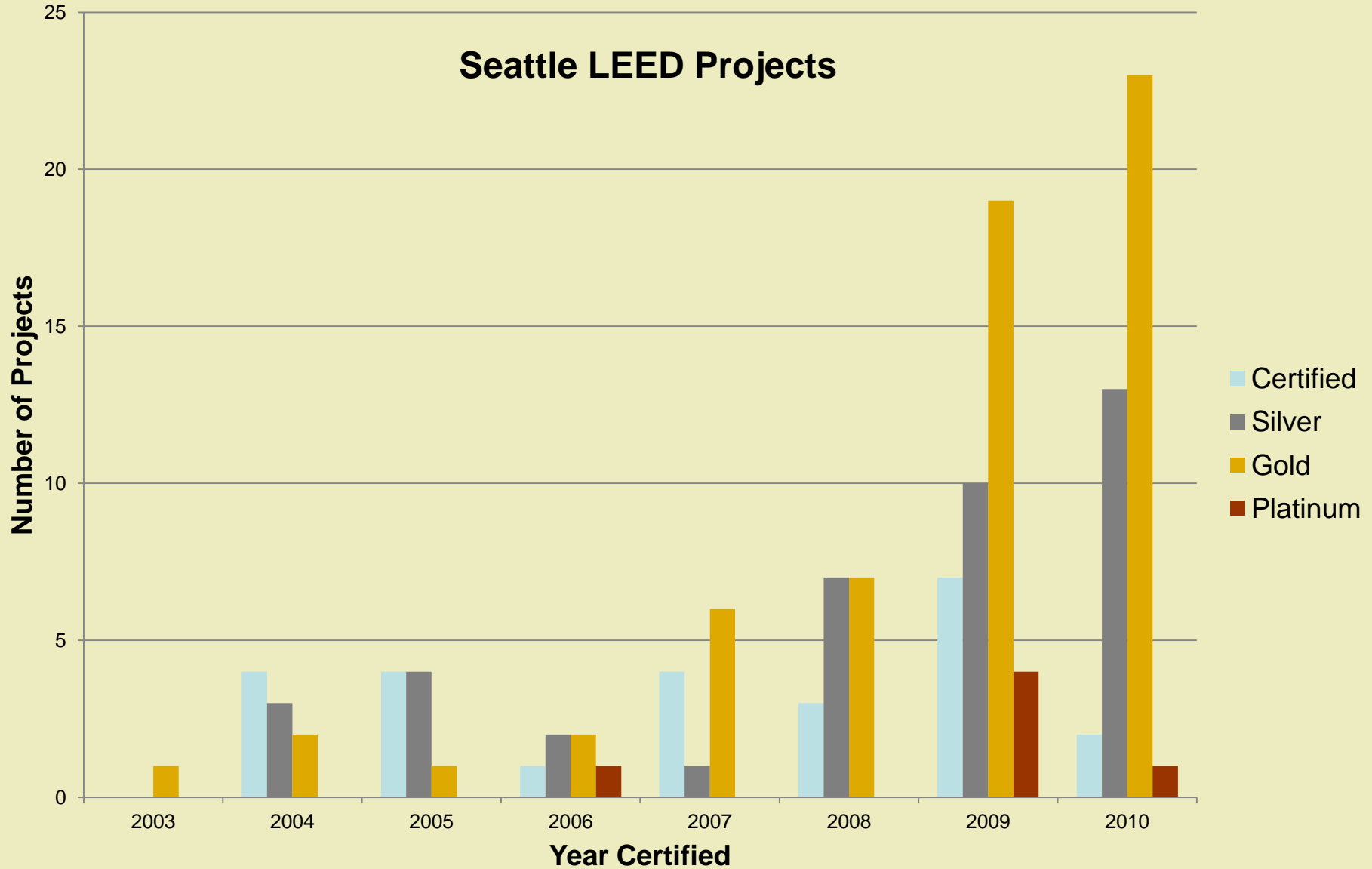
Ideal Green Parks Parks & Recreation





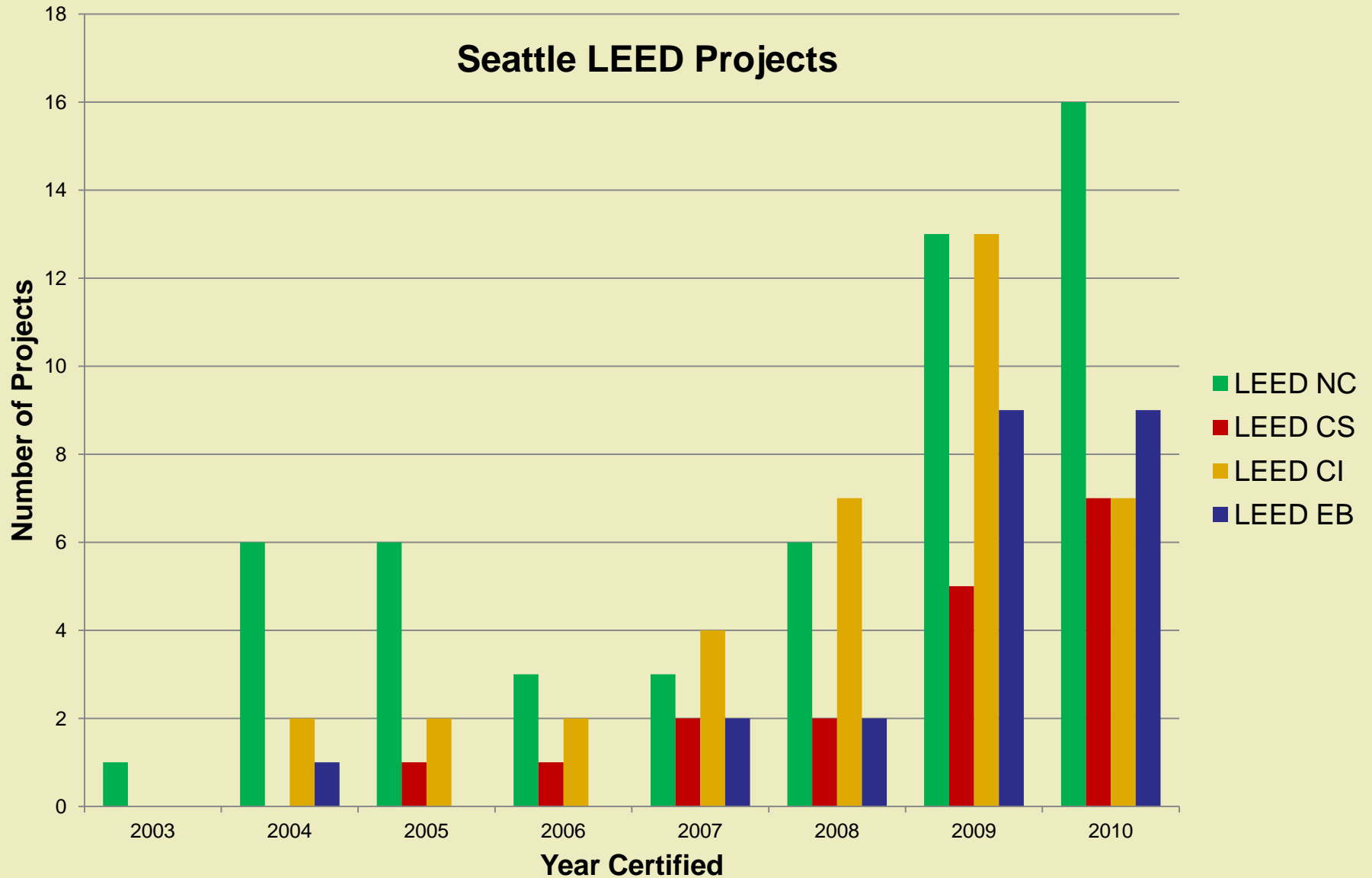


2000 Sustainable Building Policy Successes: Market Transformation





2000 Sustainable Building Policy Successes: Market Transformation





2000 Sustainable Building Policy Successes: Municipal Policies

Greensburg, KS	LEED Platinum Equivalent
State of Michigan	LEED Platinum Equivalent
Portland, OR	LEED Gold + 30% energy ¹ & water reduction; no potable water for irrigation; 85% waste diversion; green roof; on-site renewable energy
Vancouver, BC	LEED Gold + 30% energy reduction
Federal	LEED Gold + Energy Star + 30% energy reduction ¹
Dallas, TX	LEED Gold + 17% energy reduction ¹ ; 20% water reduction
State of Minnesota	MN Sustainable Bldg Guidelines + EUI target @ 60% energy reduction ²
King County	LEED Gold
Washington, DC	LEED Silver + Energy Star rating of 75
LEED Silver	Seattle, WA; Whatcom County, WA; Bellingham, WA; Everett, WA; Washington State; Austin, TX; Baltimore, MD; Chicago, IL; San Jose, CA

1. Compared to ASHRAE 90.1 baseline; 2. compared to typical regional building of the same type



❖ Comprehensive Plan

Toward a Sustainable Seattle

❖ Seattle Climate Action Plan

*Reduce GHG Emissions 58% by 2030
Net Zero GHG Emissions by 2050*

❖ Living Building Challenge Pilot

❖ Priority Green Permitting

❖ Energy Benchmarking

❖ Incentive Zoning

❖ 2030 District

Playhouse Design
Greenleaf Construction



Terry Thomas Building
Weber Thompson Architects
Photo: Lara Swimmer



Alcyone
Harbor Properties
GGLO Architects





- Policy Scope – only addressed new construction & larger projects
- Criteria – LEED doesn't guarantee energy improvements beyond Seattle Energy Code
- Performance – Minimal post occupancy data available
- Costs / Savings – Minimal data on green capital & operational costs
- Life Cycle Costing – Capital vs. Operations budgets

Northgate photos courtesy of Miller/Hull



Cedar Water Treatment Facilities photos by Lara Swimmer





Policy Update Process

INDIVIDUAL DEPARTMENTAL SCOPING SESSIONS

Q4 2009
OSE, SPU, SCL, FAS, PARKS,
SC, SPL, SDOT, OH, CBO

BRIEFINGS

Status / Input

Preliminary Draft Proposal

MO Senior Staff
Oct. 28

Environment & Sustainability IDT
Oct. 28

City Council
Nov. 1

Design Commission
Nov. 4

Planning Commission
Nov. 30

Mayor / Senior Staff
March 29

Capital Cabinet
April 11

City Council
May 9

INTERDEPARTMENTAL TEAM MEETINGS: OSE, SPU, SCL, FAS, PARKS, SC, SPL, SDOT, OH, CBO

1: Aug. 2

- Background
- IDT Purpose
- Research
- Feedback on Exist. Policy

2: Aug. 26

- Other Exist. City Policies
- SDP Goals
- SDP Scope

3: Sept. 16

- Goals / Principles
- Standards
- Scope & Approaches

4: Oct. 19

Approach:
New Construction / Major Renovation

5: Nov. 2

Approach:
Exist. Buildings / Operations & Maintenance

6: Nov. 30

Approach:
Tenant Improvement / Sites

7: Mar 10

Preliminary Draft Proposal

Departmental Feedback via IDT Members

FOCUS GROUPS

Project Managers

Operations & Maintenance

Budget / Financing

Focus Areas

Individuals / Departments

Private Practitioners



adopting a Buildings and Sites Policy for municipal facilities

Mar 10: IDT Review Meeting
Draft Recommendations

Individual Meetings
FAS Capital Division
•FAS Operations
•CBO
•Parks
•Real Estate

Focus Groups
•Project Managers
•Operations & Maintenance Staff
•Private Practitioners
•Green Building Task Force members

Topic meetings
•New Construction
•Tenant Improvements
•Existing Buildings

IDT Review Meetings: June 9 / June 23
Proposed Resolution

July 4
IDT Reviews Revised Resolution

July 20
Review by Directors

August
Reviews by Law & CBO

October 3, 2011: Resolution 31326 passed 9-0 by Council

October 12, 2011: Signed by Mayor McGinn

November 11, 2011: Effective date of Legislation



The purpose of a Citywide policy on sustainable buildings and sites is to:

- ❖ demonstrate the City's **commitment** to addressing climate change and creating a sustainable future;
- ❖ provide **leadership** in setting community standards for sustainable development;
- ❖ provide responsible **stewardship** of the City's fiscal resources and public assets;
- ❖ create **quality environments** that are healthy and provide community benefit.

Carkeek - photo by Eric Stuhaug



Fisher Pavilion- photo by Steven Keating



SPU Operations Control Center - photo by William Wright





- All City departments and offices, and their contractors, responsible for planning, financing, designing, developing, constructing, occupying , or managing buildings and sites
- Non-City entities receiving more than 50% City funding
 - Non-City entity occupying City owned buildings

Yesler - photo by Mithun



Cedar Watershed - photo by Ralph Ness



Northgate – photos by Miller/Hull



Photo courtesy of Seattle Public Library





- ❖ LEED Gold + PLUS Minimum Requirements
- ❖ Broaden scope
Sites, Small Projects, Leasing
- ❖ Pilot advanced standards
- ❖ Assessment & Performance





Guidelines (section 3)

- Triple Bottom Line
- Life Cycle Cost
- Integrated Design Process

City Priorities (section 8)

- Design Quality
- Transportation Impacts
- Climate Adaptation
- Art
- Urban Forestry
- Public Safety
- Co-location
- Deconstruction





	New Construction, Additions & Major Renovations (4.1)	Minor Renovations & Tenant Improvements (4.2)
Project Scope	5,000 SF or greater	5,000 SF or greater <i>-and-</i> mechanical, electrical, plumbing
Standard	<p>LEED NC Gold +</p> <ul style="list-style-type: none"> • 15% energy reduction • 30% water reduction, • 90% (75%) waste diversion • Bicycle facilities 	<p>LEED CI Gold +</p> <ul style="list-style-type: none"> • 30% water reduction • 75% (60%) waste diversion
Pilot (section 7)	Living Building Challenge	



	New Construction, Additions & Major Renovations (4.1)	Minor Renovations & Tenant Improvements (4.2)
Project Scope	<ul style="list-style-type: none"> • Less than 5,000 SF <i>-or-</i> • Non-LEED eligible 	<ul style="list-style-type: none"> • Less than 5,000 SF <i>-or-</i> • Non-LEED eligible <i>-or-</i> • No MEP
Standard	Capital Green	Capital Green

Photo courtesy of Mithun



Photo by Lara Swimmer



Project Scope	All landscaped areas
Standard	Citywide site management guidelines
Pilot (section 7)	Sustainable Sites Initiative





- ❖ Sustainable Buildings & Sites Steering Committee
 - ❖ Annual Reporting
 - ❖ Evaluation





❖ Seattle City Light

- Energy Analysis
- Lighting, Equipment, Custom Measures
- Commissioning
- Renewable Energy

❖ Puget Sound Energy

- Whole Building Efficiency
- Lighting, Equipment, Custom Measures
- Commissioning

❖ Saving Water Partnership

- Toilets
- Cooling & Refrigeration
- Sprinklers

❖ Seattle Public Utilities

- Stormwater Facility Credit



New construction

Seattle City Light works collaboratively with design teams to create healthy, high performance buildings with low long-term operating costs. Financial Incentives, Energy Analysis Assistance and Commissioning Assistance work together to build energy efficiency into your project from the beginning.

Our Energy Management Analysts, many of whom are LEED accredited, are here to help you achieve your goals. They will work with you to optimize building systems for both efficiency and high performance.

Please contact us early in the design process. By making energy efficiency an integral part of the building's design, you maximize the value of assistance offered by Energy Smart Services while maximizing building performance.

Energy and dollar savings start on day one.

Energy Analysis Assistance
We provide financial support for professional engineering services to research and evaluate various building system designs. For all the details, see our [Program Manual](#), (pdf format, 1.5 MB)

Commissioning
[Building Commissioning](#) verifies that installed equipment and systems are operating as the design intended. Funding is available to help customers develop an independent commissioning plan.

Financial Incentives
Seattle City Light offers funding for the installation of equipment and controls that go beyond energy code requirements. Some examples:



Saving Water Partnership - Rebates

Contact Us | Site Map

Saving Water Partnership
Seattle and Participating Local Water Utilities

Home Conserve Inside Conserve Outside Conserve at Work Education / Resources About Us

Rebates

Utilities participating in the [Saving Water Partnership](#) offer financial incentives for:

- [Owners/Managers of Apartments and Condos](#)
- [Industrial & Commercial Customers](#)
- [Residential Customers](#)



- ❖ Sites Management Working Group
- ❖ Pilot Projects
- ❖ Project Assistance
- ❖ Annual Reporting Tools
- ❖ Update Capital Green
- ❖ Training
- ❖ Website Updates
- ❖ Buildinggreen.com access
- ❖ Standard Specifications
- ❖ Green Lease Template
- ❖ LEED Plus Implementation Guide





Citywide Resource Conservation Management Plan

- Citywide Portfolio
- Building Inventory & Benchmarking
- Long-term:
Meet City's Climate Change Goals
- Near-term:
20% Energy Reduction by 2020
Water Use Reductions by 2020





www.seattle.gov/greenbuilding
go to “City Projects”

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