

The Movement Towards Neighborhood Sustainability

Peter Dobrovolny – City of Seattle
 Rob Bennett – Portland Sustainability Institute
 Alisa Kane, Green Building Manager, City of Portland
 Brian Geller – Director, Seattle 2030 District




The EcoDistricts™ Framework
 Building Blocks of Sustainable Cities

Why Neighborhood Sustainability?

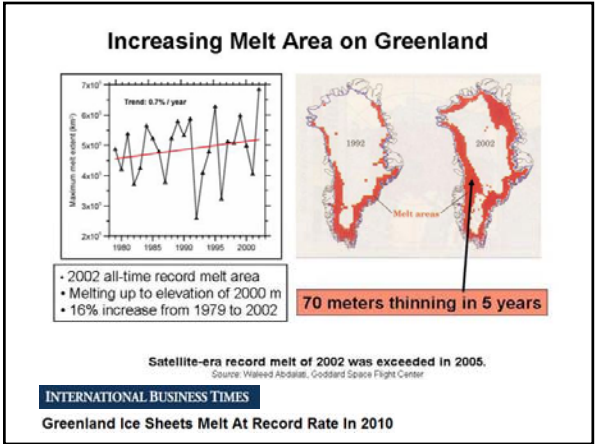
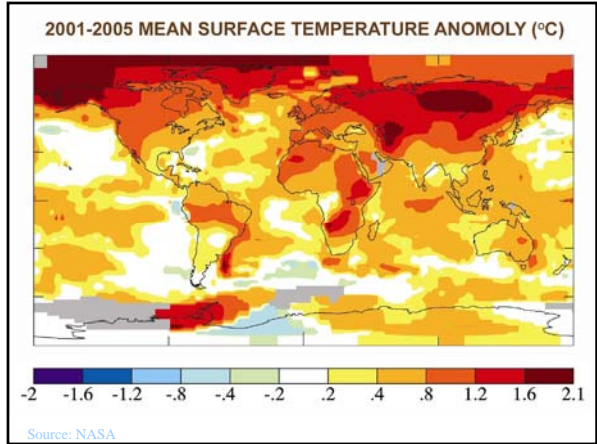
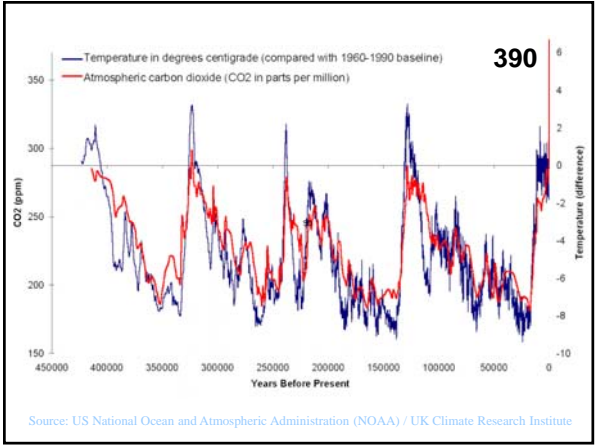




GLOBALLY, WE FACE
 A CLIMATE CHANGE CRISIS
 WHICH IS AN ENERGY CRISIS







TIME
IN PARTNERSHIP WITH **CNN**

Environment: Dying Oceans, Poisoned Seas

Monday Nov 08, 1971

In 1942, when French Undersea Explorer Jacques Cousteau explored the Sargasso Sea, he could see underwater for about 300 ft. Today, he reports, the visibility has shrunk to barely 100 ft. When he first started diving in the Mediterranean 25 years ago, it was filled with life. Today? "You can hardly see a fish 3 in. long." What has happened is that pollution has caught up with the seas' and oceans' ability to cleanse themselves. Cousteau estimates that the vitality of the seas, in terms of fish and plant life, has declined some 30% to 50% in the past 20 years.



April 17, 2011

npr With Climate Change Comes Floods



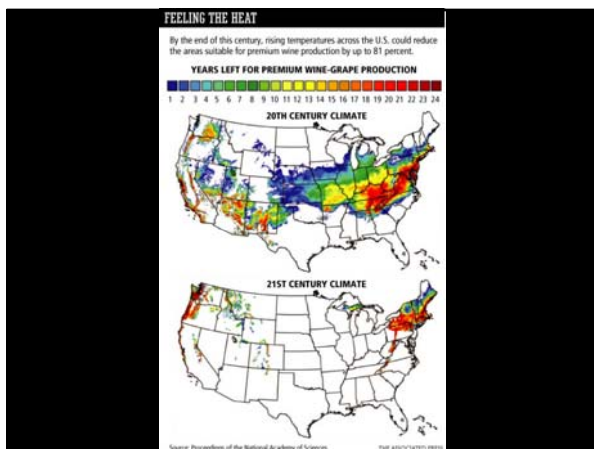
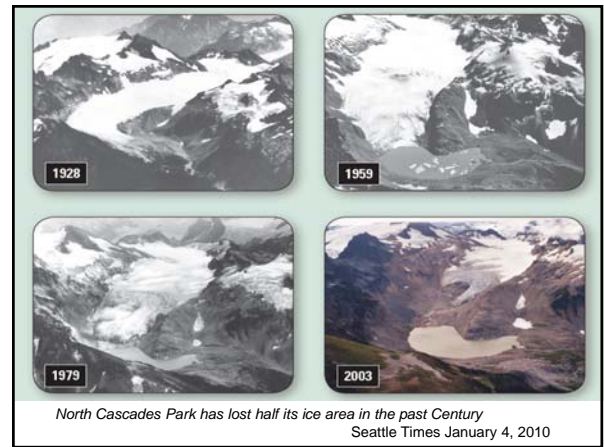
AFF/Getty Images

Bangladeshi women make their way through flood water at Dhakuria in Sirajgonj district on Sept. 10, 2007.

ScienceDaily
Your source for the latest research news

Global Warming to Bring More Intense Storms.....





How can the way we create and recreate our communities begin to address these challenges?

SEATTLE
2030
DISTRICT

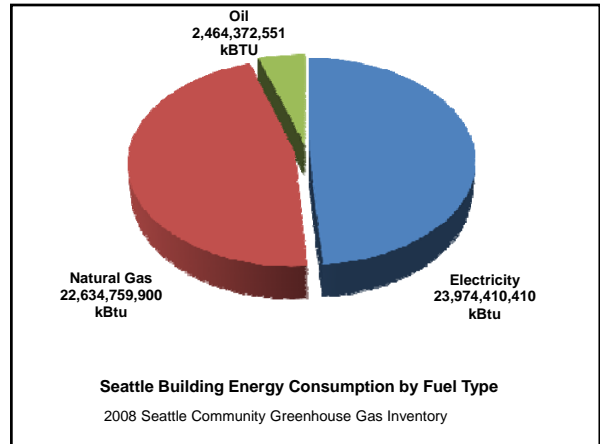
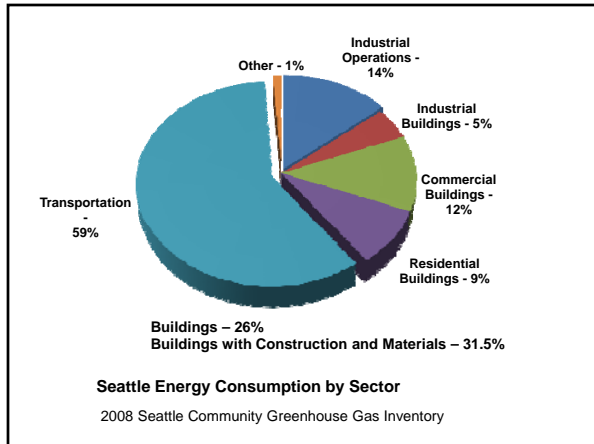
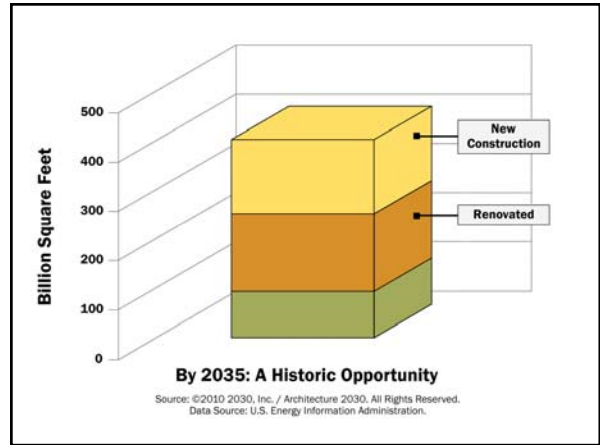
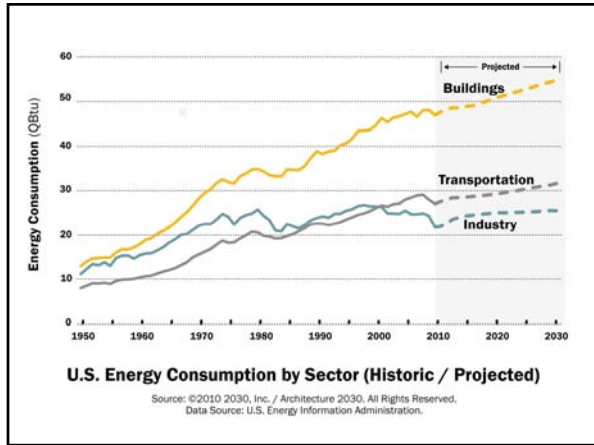
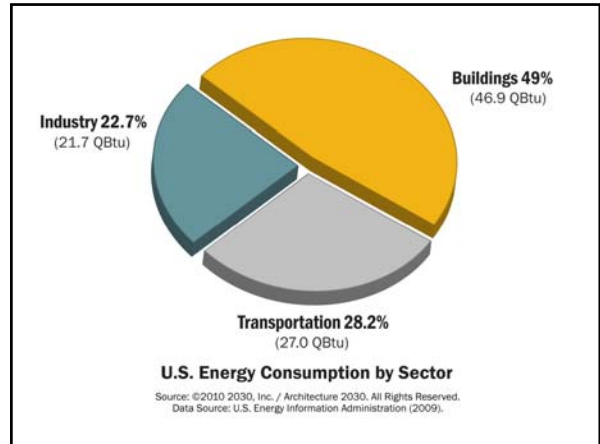
portland sustainability institute

The EcoDistricts™ Framework
Building Blocks of Sustainable Cities

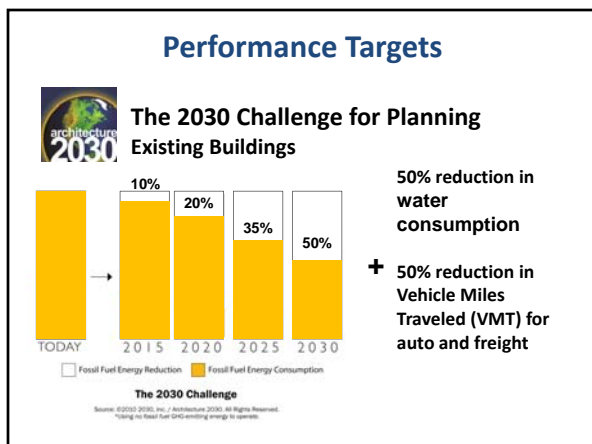
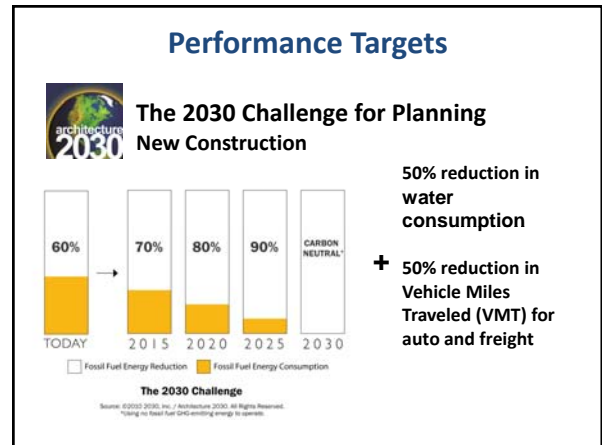
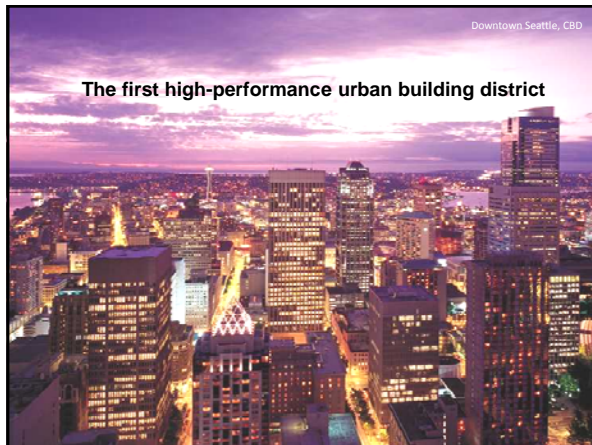


**SEATTLE
2030
DISTRICT**

A Groundbreaking high-performance building district in Downtown Seattle





The Regulatory Perfect Storm

US Conference of Mayors (USCM) Resolution #50 for all Cities


- June 2006
- Calls for all new buildings and renovations (in all cities) to meet the 2030 Challenge.

http://www.architecture2030.org/files/USCM_Resolution_50.pdf

Seattle City Council

- A 2010 priorities was to adopt a carbon neutral goal for Seattle with specific milestones and implementation steps, along with a plan for adaptation to the effects of climate change.

The Regulatory Prefect Storm



State of Washington

- Legislation SB 5854
- Energy Code reductions to 70% by 2030

<http://apps.leg.wa.gov/billinfo/summary.aspx?bill=5854&year=2009>



City of Seattle

- Ordinance CB 116731
- Public energy disclosure

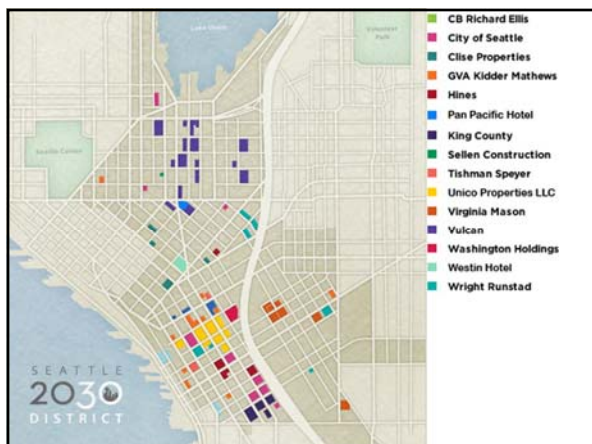
<http://www.seattle.gov/dpd/GreenBuilding/OurProgram/PublicPolicy/Initiatives/DPDP018682.asp>



Elliott Bay / Seattle

A Common Vision

- City of Seattle Disclosure Ordinance
- City of Seattle Sustainable Development Policy update
- Community Power Works
- Emerald Cities
- King County
- Municipal Retrofit IDT
- Seattle Climate Partnership
- Yesler Terrace redevelopment




United States Environmental Protection Agency

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1. Summary Information Page

a. Project Title

Activating the Seattle 2030 District
A Public-Private Alliance to Achieve Carbon Reduction

b. Applicant Information

City of Seattle

City of Seattle—Department of Planning and Development
P.O. Box 34819, Seattle, Washington 98134-0419
Contact: Peter Dobrowsky, Green Building Specialist
phone (206) 615-1094 | fax (206) 233-7883 | e-mail peter.dobrowsky@seattle.gov

c. Funding Requested **\$454,292**

d. Total Project Cost **\$683,874**

See budget summary and budget narrative for funding from other sources, co-funders, and in-kind contributions from project partners. As indicated in the attached letters of support, in-kind contributions of staff participation from the 2030 District members total more than **\$226,000**, significantly exceeding the budgeted contributions of \$166,275.

THE WHITE HOUSE PRESIDENT BARACK OBAMA

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The solution to the climate crisis isn't far off in the future - it's in the buildings we inhabit, our civic infrastructure and the way we organize our lives.
- President Barack Obama

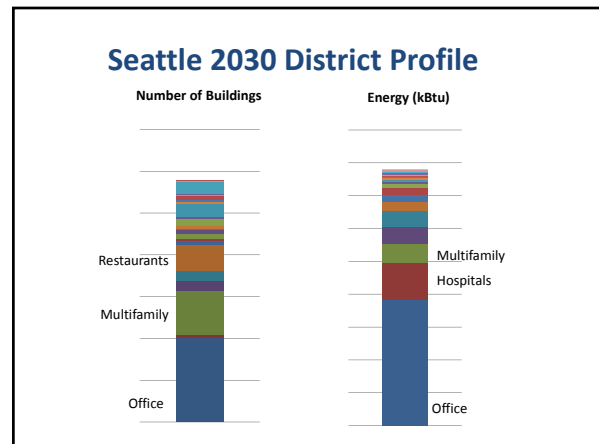
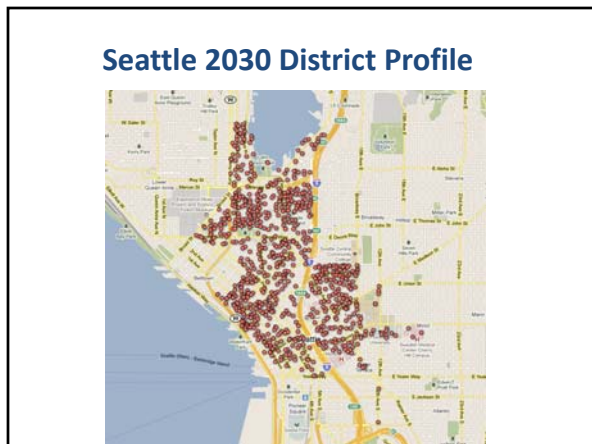
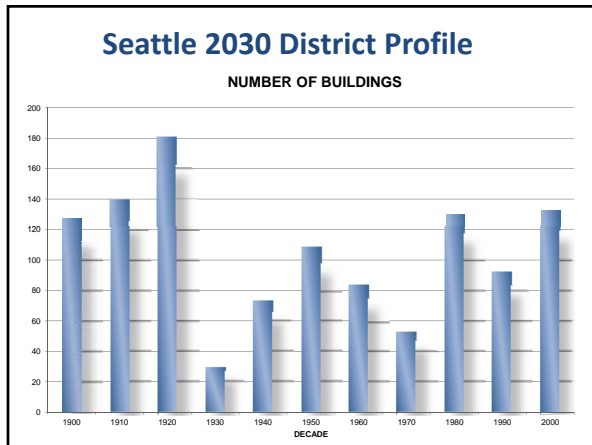
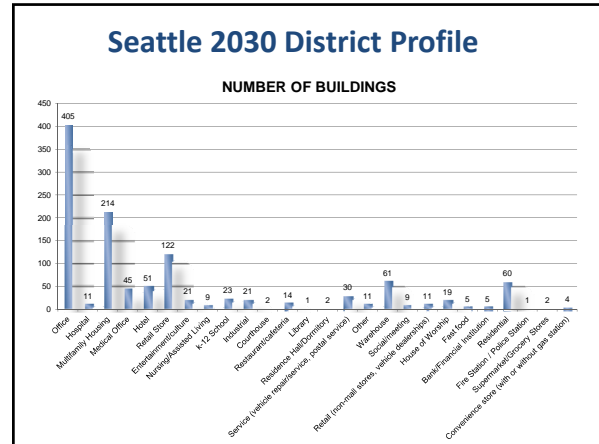
COMBATING CLIMATE CHANGE: CLINTON CLIMATE INITIATIVE

Better Buildings Challenge: Place-Based Ally Agreement

The **Better Buildings Challenge** is a Presidential leadership initiative which calls on chief executive officers, university presidents, and state and local leaders to create American jobs through building energy efficiency. Challenge partners will make 'public commitments to action' and implement their plans to achieve lasting energy savings, improve our environment, and reduce our dependency on foreign oil. They will receive technical and implementation support from the Department of Energy in collaboration with other federal agencies and the William J. Clinton Foundation's Clinton Climate Initiative. BBC Place-Based Allies are asked to support the BBC by advocating for energy efficiency and transparently demonstrating their approaches and accomplishments.

Place-Based Ally Agrees to: Commit Assist

The Department of Energy (DOE) Agrees to: Commit Assist



Performance Targets

Target Finder

REQUIRED
Select a target rating and/or compare your Design Energy to the target.

1. Facility Information

*Zip Facility Name
 Code City State

2. Facility Characteristics

*Select Space Type(s) for this project.
 (Space Types)

3. The Target¹

Target Rating Energy Reduction Target
 Or

*Choose the Design target and select "View Results" to display associated energy use for the target.

4. Estimated Design Energy

Use results from energy analysis and enter total estimated energy for the design. Select "View Results" to compare Estimated Energy Use to your Target.

Performance Targets - Energy

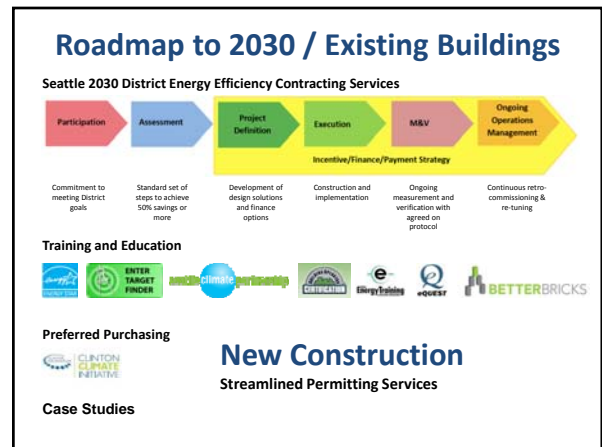
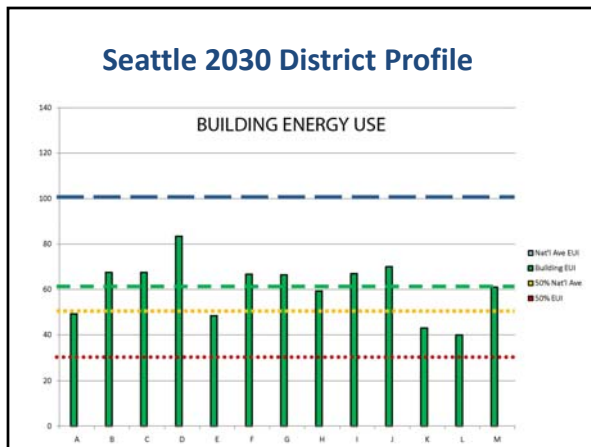
BUILDING TYPE DESCRIPTION	# OF BUILDINGS	FLOORSPACE (SF)	AVG ENERGY USE (kBtu/sf/yr)
Bank/Financial Institution	4	36,501	69
Convenience store (with or without gas station)	4	6,572	24
Courthouse	2	642,902	104
Entertainment/culture	13	1,808,711	98
Fast food	4	17,098	53
Hospital	6	2,956,960	314
Hotel	37	4,533,136	74
House of Worship	12	298,289	25
Industrial	13	308,062	205
K-12	15	837,411	73
Library	1	412,000	104
Medical Office	31	3,873,403	91
Multifamily Housing	196	8,134,107	46
Nursing/Assisted Living	5	615,388	124
Office	265	23,567,325	77
Other	7	268,661	104
Residence Hall/Dormitory	1	45,288	8
Restaurants/Cafeteria	9	116,945	302
Retail (non-mail stores, vehicle dealerships)	8	178,096	85
Retail Store	84	2,480,167	70
Service (vehicle repair/service, postal service)	20	270,658	73
Social/meeting	7	213,540	52
Supermarket/Grocery Stores	2	12,338	28
Warehouse	40	806,604	23
Seattle 2030 District	786	52,440,162	

Performance Targets - Water

BUILDING TYPE	BASELINE GAL/SF/YR
Restaurant	125.99
Hotel	50.07
MultiFamily	41.14
Social/meeting	36.95
Industrial	32.53
Nursing/Assisted Living	30.11
SF Residential	27.63
Hospital	26.12
Retail	24.77
Medical Office	21.00
Office	14.21
Warehouse	13.00
Entertainment/culture	12.88
Service (vehicle repair/service, postal service)	11.74
House of Worship	11.31
K-12 School	11.09

Performance Targets – Transportation CO2

Mode	Trips	Miles	% Trips	kg CO2*	% CO2	kg CO2/pm	
WALK/BIKE			8.88%	0.00	0.00%		
Walk	151	271.80	4.56%	0.00	0.00%		
Bike	42	264.60	1.38%	0.00	0.00%		
Bike rack	5	73.50	0.15%	0.00	0.00%		
Compressed Week Day Off	66	1,164.20	2.17%	0.00	0.00%		
TRANSIT			32.88%	4,864.83	46.49%		
Bus	1,366	19,124.00	44.89%	3,251.08	31.07%	0.170	
Rail	138	3,795.00	4.53%	652.74	6.24%	0.112	
Ferry	94	2,528.60	3.09%	935.58	8.94%	0.170	
Other	11	149.60	0.36%	25.43	0.24%	0.170	
RIDESHARE			8.38%	492.35	4.71%		
Carpool	249	3,336.60	8.18%	485.32	4.64%	0.180	
Vanpool	6	144.60	0.20%	7.23	0.07%	0.250	
DRIVE			30.07%	5,107.04	48.80%		
Drive Alone	859	12,111.90	28.23%	4,844.76	46.30%	0.54	
Ferry with Vehicle	21	493.50	0.60%	197.60	1.89%	0.54	
Motorcycle	35	388.50	1.15%	64.88	0.62%	0.180	
Actual Occupancy*	609						
Number Surveys*	609						
<small>*Used for CO2 calculations to weight the survey for the whole building. Timeframe is one week.</small>							
RESULTS	Baseline CO2 548,095.61 kg CO2					Baseline kg CO2/OCCUPANT/YR 0.90	
Drive Alone Trips	30%	Transit Trips	33%	Drive-Along CO2	49%	Transit CO2	46%
Rideshare Trips	9%	Walk/Bike Trips	9%	Rideshare CO2	5%	Walk/Bike CO2	0%
Building CO2 544,130.21 kg CO2							
Percent CO2 Reduction 0.73%							







EcoDistricts
Building Blocks for Sustainable Cities

Rob Bennett
Alisa Kane
Oct 20, 2011

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MISSION

- Transitioning to a Low Carbon & Green Economy
- Greening the Built Environment

ACTIONS

- Drive high impact projects
- Develop innovative public policy
- Increase public awareness
- Accelerate global best practices

INITIATIVES

- Climate Prosperity Greenprint
- Oregon Sustainability Center
- EcoDistricts

building blocks of sustainable cities

ECODISTRICTS

A neighborhood committed to improving its sustainability performance over time with:

1.  GREEN BUILDINGS
2.  SMART INFRASTRUCTURE
3.  BEHAVIOR & CHOICE

Districts are an important scale to accelerate sustainability — small enough to innovate quickly and big enough to have a meaningful impact.




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drivers

ECODISTRICTS

- Jobs
- Carbon
- Urban form
- Growth management
- Smart infrastructure
- Mobility
- Resilience
- ROI






value proposition
ECODISTRICTS


- o TEST BED for building, infrastructure, and demand management solutions
- o INNOVATION – Support the growth of clean tech and green development cluster
- o TRIPLE BOTTOM LINE ROI supporting economic, environmental and equitable outcomes
- o POLICY – Align and accelerate local public policies – link to state and federal agendas (e.g. HUD-DOT-EPA)
- o BRAND cities sustainability leadership
- o RESEARCH partnership with local universities

value proposition
ECODISTRICTS

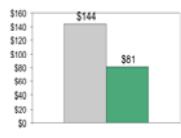
- o Public private partnerships that link:
 - Real estate development
 - Infrastructure projects
 - Demand management projects
- o Vehicle to recruit consortium of companies and researchers to participate
- o Vehicle for supporting tech commercialization



value proposition
ECODISTRICTS

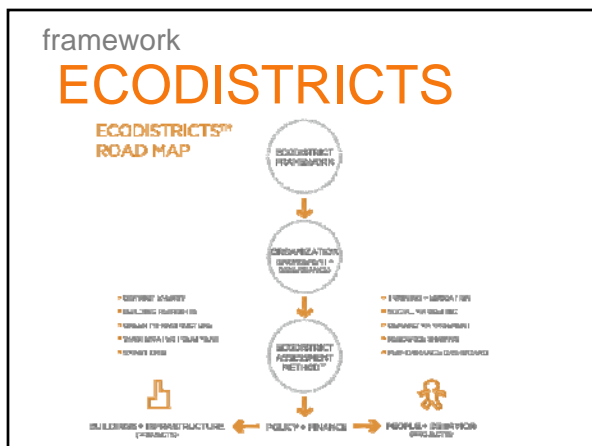


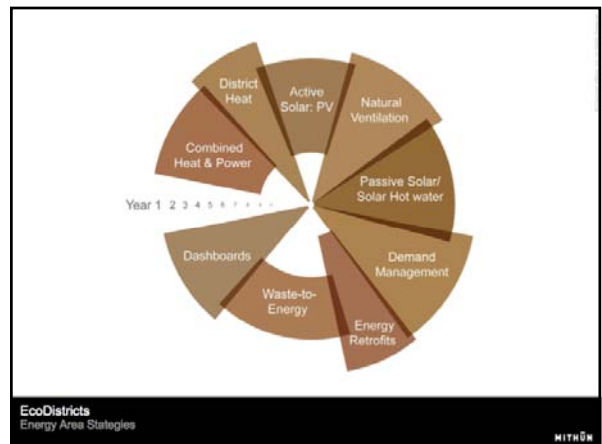
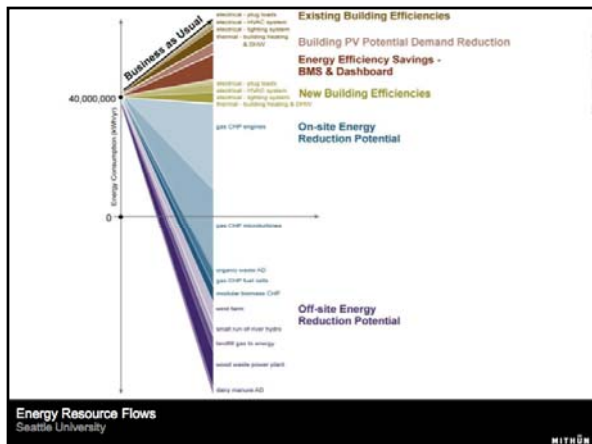
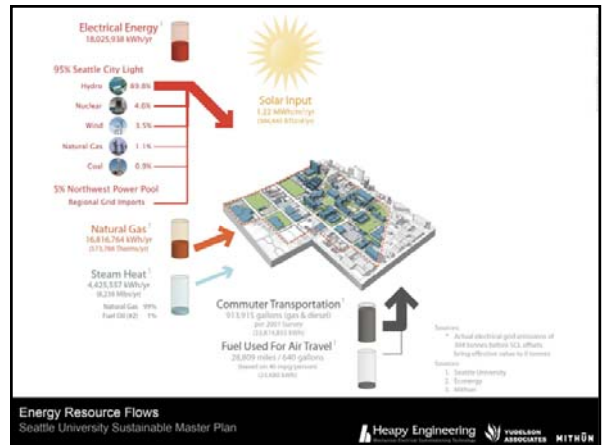
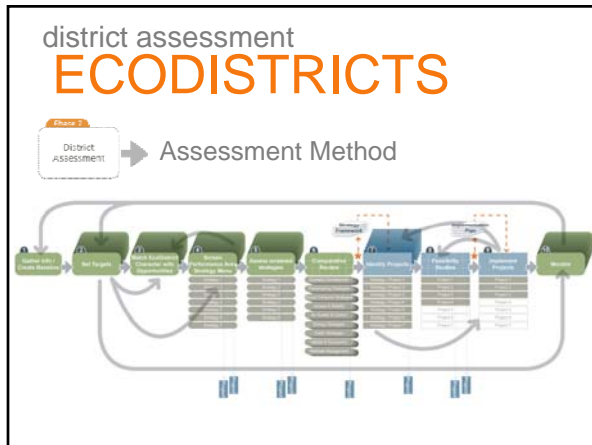
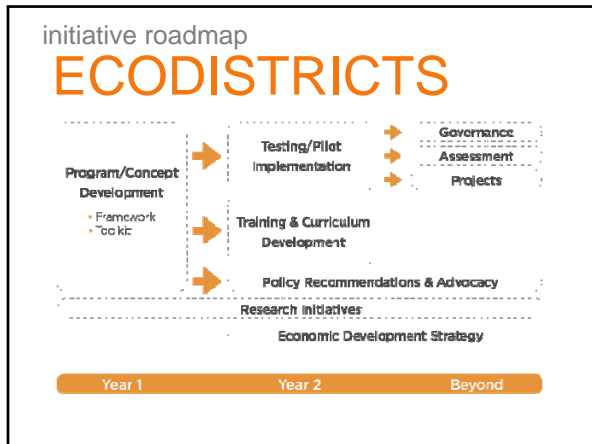
Grey to Green

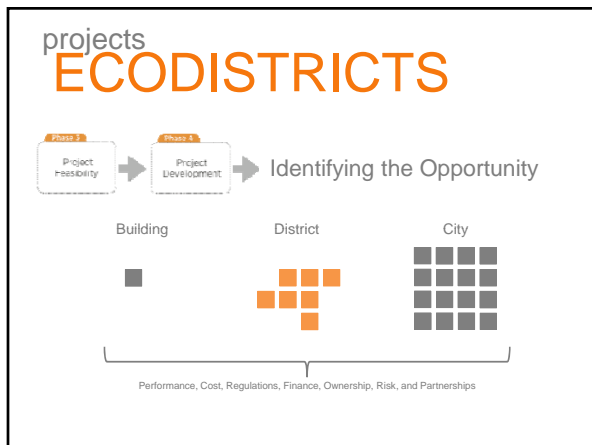
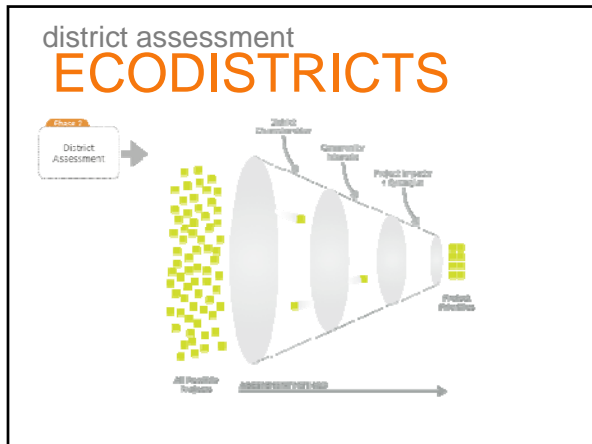


- o \$63M savings (\$11M investment)
- o Achievement of watershed goals
- o Improved placemaking
- o Enhanced property values
- o Local job generation

Courtesy of Putman Infrastructure







projects
ECODISTRICTS

Types of Projects

GREEN BUILDINGS SMART INFRASTRUCTURE BEHAVIOR & CHOICE



projects
ECODISTRICTS

Smart Infrastructure Strategy

Objective:

- o Create district infrastructure strategy and roadmap to leverage public and private investments to catalyze EcoDistrict development.

Scope:

- o Establish infrastructure concepts for energy, water, transportation and waste management
- o Create district performance specification ("performance spec")
- o Develop of a "unified CIP" to guide public infrastructure improvements (cross bureau integration)
- o Identify potential 3rd party infrastructure opportunities
- o Develop and test business model scenarios for implementation

projects
ECODISTRICTS

Behavior & Choice

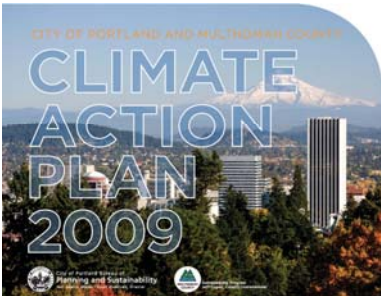


KNOWLEDGE + GOALS + PROJECTS + INCENTIVES = ACTION

Courtesy of Puttman Infrastructure



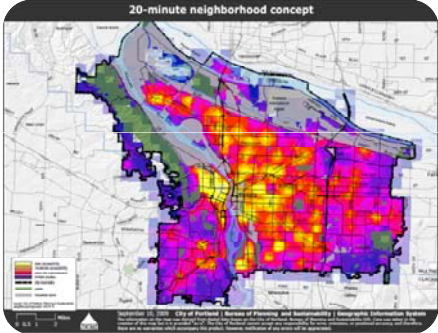
CLIMATE ACTION



PORTLAND PLAN



HEALTHY CONNECTED CITY



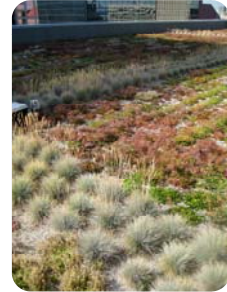
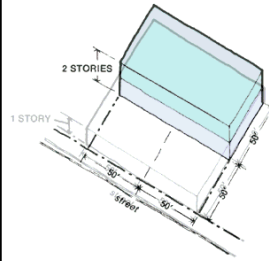
POLICY & CODE



FINANCING



INCENTIVES



ENERGY EFFICIENCY



SOLARIZE PDX



COOPERATIVE SOLAR



DISTRICT ENERGY



Presented by GE and the City of Portland

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The EcoDistricts Summit
Accelerating Sustainability at a District Scale

October 26-28, 2011
Portland, Oregon



www.ecodistrictsummit.com



THANK YOU!

www.pdxinstitute.org
www.portlandonline.com