portland sustainability institute

The EcoDistricts Initiative

Accelerating Sustainability at a District Scale

Draft Framework
March 2010

Executive Summary

The EcoDistricts Initiative takes a comprehensive approach to neighborhood development — at the intersection of buildings, infrastructure and people.

In 2009, the Portland Sustainability Institute (PoSI), in partnership with the City of Portland, launched the EcoDistricts Initiative as part of the Portland region's broadening commitment to sustainability. The EcoDistricts Initiative is a comprehensive strategy to accelerate sustainable neighborhood development. PoSI drafted this framework to clarify the value proposition, define performance areas, and outline an implementation strategy.

An EcoDistrict is a neighborhood or district with a broad commitment to accelerate neighborhood-scale sustainability.[1] EcoDistricts commit to achieving ambitious sustainability performance goals, guiding district investments and community action, and tracking the results over time.

PoSI recognizes that technologies and strategies for enhancing neighborhood sustainability, such as energy and water management systems, green streets, and resource conservation, are well known. However, the widespread deployment of these strategies has been slow to develop due to lack of comprehensive assessment tools, scalable project capital, and public policy support. The EcoDistricts Initiative focuses on removing these implementation barriers and creating an enabling strategy to accelerate neighborhood-scale sustainability.

The EcoDistricts Initiative is distinct from most green development strategies that focus on brownfield or greenfield development that are primarily led by master developers or public agencies. Instead, the EcoDistricts Initiative targets neighborhoods — at the intersection of buildings, infrastructure and people. PoSI is working upstream of rating systems like LEED-ND to develop tools and strategies for engagement and project implementation.

The EcoDistricts Initiative brings together community stakeholders, property developers, utilities, and the City of Portland to solidify a shared sense of purpose and partnership through the following actions:

- Create an engagement and governance strategy to build community support, set priorities and act
- Develop an assessment and management toolkit to guide project development and track ongoing performance
- Implement sustainability projects through technical and economic feasibility analysis, assembly of project financing, and establishment of public-private partnerships
- Identify commercialization opportunities for companies to test promising products and practices
- Establish municipal policy and regulatory structures to support EcoDistrict development

To test these concepts, PoSI is working with five pilot districts to guide strategic planning, community engagement and catalytic investments.[2] Over a three-year period, district stakeholders agree to set rigorous goals, develop a roadmap, and implement projects. In return, PoSI and its public partners are providing technical and financial resources to support the work. The EcoDistricts pilot process includes the following four phases:

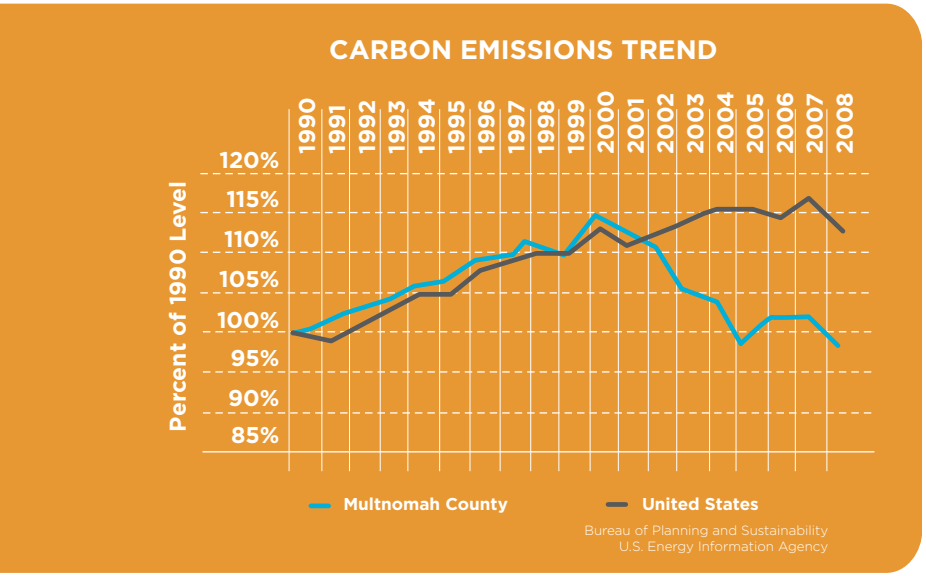
1. Engagement & governance
2. Assessment & strategy development
3. Feasibility & project implementation
4. Ongoing monitoring

Fundamentally, the EcoDistricts Initiative is an effort to deploy appropriate district-scale sustainable projects that drive experimentation and innovation. PoSI expects the EcoDistricts Initiative to produce a set of tools and strategies that cities can use in support of integrated policy goals around climate change, green building, mobility, watershed and ecosystem health, economic development, and community wellbeing.

To learn more visit www.pdxinstitute.org
or contact ecodistricts@pdxinstitute.org

I. Why

Global challenges like climate change, resource scarcity, and urbanization threaten the stability of life in metropolitan regions. For the first time in history, the majority of the world's population lives in cities, and these urban regions anticipate even greater growth. This population and resource concentration means that cities will be increasingly critical in addressing these challenges, compelling the exploration and adoption of urban sustainability solutions. Fortunately, the most powerful venues for transformative solutions are cities themselves. Cities contain the fundamental ingredients of talent, capital, technologies, and networks to enable innovation.



As cities around the world grapple with these pressing issues, the question of scale becomes increasingly important — scales of change, scales of impact, and scales of risk. While a large number of cities are adopting ambitious climate and energy reduction goals, most are struggling to bridge the gap between policy aspirations and practical investments that have significant on-the-ground impacts. Given the modest results to date, more ambitious performance-based planning, investment, and monitoring strategies are essential. International precedents show that districts, or neighborhoods, provide the appropriate scale to test integrated sustainability strategies because they concentrate resources and make size and risk more manageable.

Districts like Western Harbor in Malmö, Sweden; Southeast False Creek in Vancouver, Canada; and Dockside Green in Victoria, Canada are creating a new generation of integrated district-scale community investment strategies at a scale large enough to create significant social and environmental benefits, but small enough to support quick innovation cycles in public policy, governance, technology development, and consumer behavior. Each of these districts is measuring a set of important sustainability indicators — local greenhouse gas emissions, vehicle miles traveled, transportation mode splits, stormwater quality, access to healthy, local food, utility savings, job-housing mix, and access to services, among others.

However, most of these projects are not designed to be replicable. For sustainable neighborhoods to grow roots and propagate over time, cities need to align social, political, and institutional interests to support new governance and finance models; a set of new technical and policy instruments to guide investments and monitor results over time; and new engagement strategies to build broad-based support.

Portland provides fertile ground to respond to and accelerate best practices in sustainable development. The region's history of leadership and expertise in growth management, green building, green infrastructure, and mobility investments match a rich history of community activism and engaged citizenry. Portland's ability to maintain its distinctiveness and stimulate place-based innovation will depend largely on how new strategies are accelerated and scaled up to meet the needs of citizens while significantly reducing the region's collective sustainability footprint.

The economic benefits of such investments create significant competitive and livability advantages for the region while providing long-term value for the existing business community and creative job opportunities for citizens.[3] Indeed, the region's efforts to grow clean tech businesses and sustainable industries are a direct outcome of the region's investment in quality of life and sustainable urbanism.[4]

II. What

An EcoDistrict is a neighborhood or district with a broad commitment to accelerate neighborhood-scale sustainability. EcoDistricts commit to achieving ambitious sustainability performance goals, guiding district investments and community action, and tracking the results over time.

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The EcoDistricts Initiative is distinct from most green development strategies that focus on brownfield or greenfield development that are primarily led by master developers or public agencies. Instead, it targets neighborhoods — at the intersection of buildings, infrastructure and people. PoSI is working upstream of rating systems like LEED-ND to develop tools and supporting strategies for engagement and project implementation.

Objectives

- Promote sustainable neighborhood development
- Promote faster innovation cycles for emerging sustainable practices and technologies
- Support the creation of community-led district governing entities to manage EcoDistrict Implementation
- Create metrics and protocols for setting goals, baselining performance, and prioritizing projects
- Accelerate integrated infrastructure projects, including district utilities (energy, water, and waste)
- Formalize new municipal policy and regulatory structures that institutionalize sustainable neighborhood development

The EcoDistrict Initiative is being pursued as a means for creating new pathways to sustainability in a manner that is locally responsive, equitable, and cost effective. It is centrally focused on cities and metropolitan regions, where the greatest opportunity for addressing global and localized impacts from urbanization and human consumption reside. In Portland, it is an important piece of a broader regional strategy to create a healthier and more environmentally responsible place to sustain a growing population.

PoSI began work on the EcoDistricts Initiative in 2009.[5] Key actions include:

- Create an engagement and governance strategy to build community support, set priorities and act
- Develop an assessment and management toolkit to guide project development and track ongoing performance
- Implement sustainability projects through technical and economic feasibility analysis, assembly of project financing, and establishment of public-private partnerships
- Identify commercialization opportunities for companies to test promising products and practices
- Establish municipal policy and regulatory structures to support EcoDistrict development

Tasks to date include creating this guidance framework and starting a set of replicable analysis and engagement tools to create a workable policy and investment climate to accelerate environmental performance at the district scale.

In these early phases of development, EcoDistricts generate as many questions as they do solutions. EcoDistricts alone are not the objective; rather, the goal is a proven place-based neighborhood strategy that links investment and policy innovation to accelerate widely adopted goals and priorities around sustainability.

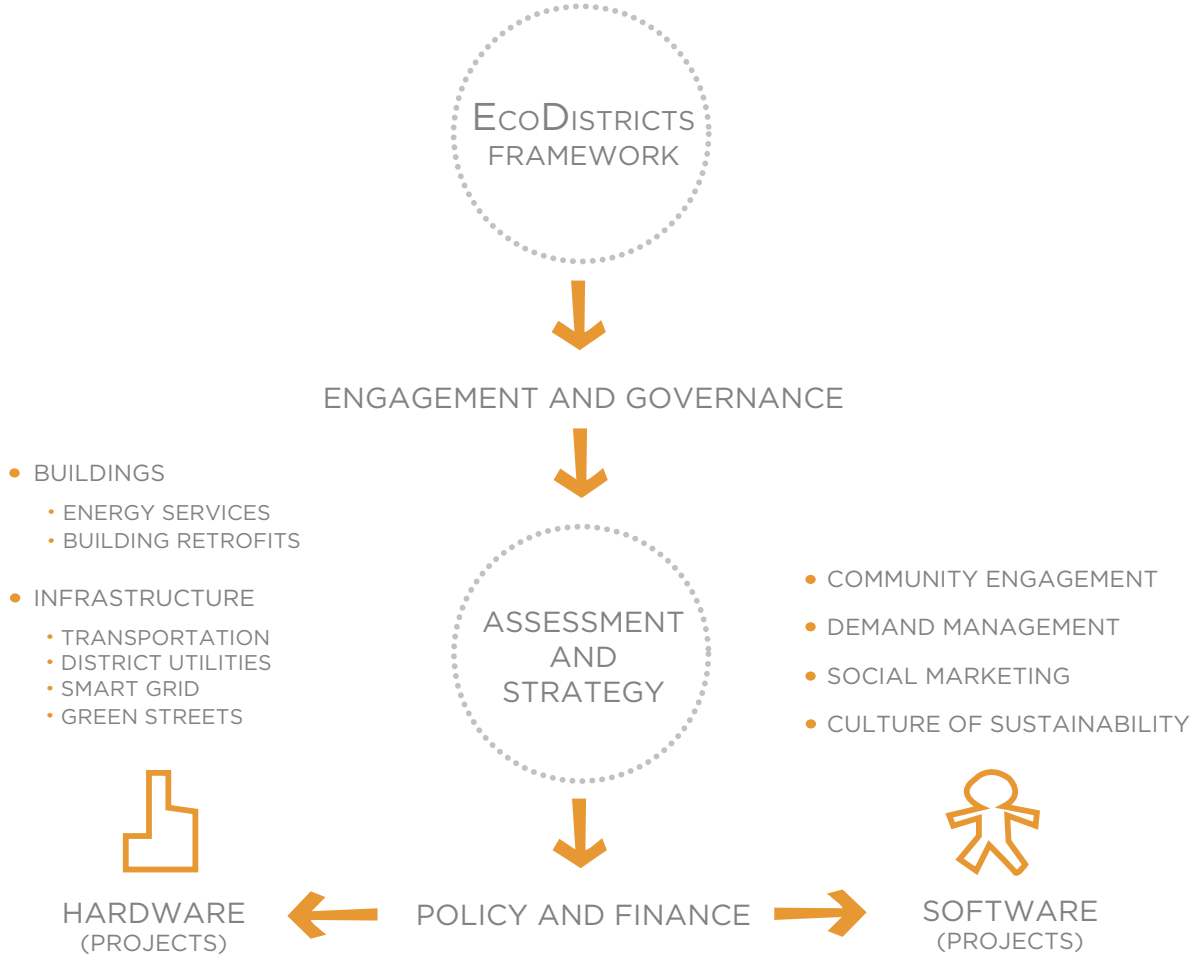
Western Harbor Bo01:
This district in Malmö, Sweden is an international example of a sustainable urban community — a dense and bustling district that meets multiple environmental goals.

The Initiative supports existing regional policies and investments in growth management, multi-modal transportation, green building, climate protection, energy efficiency, and green job creation adopted by the City of Portland, Metro and the State of Oregon. It is part of a nested regional development agenda that includes:

- Metro's Centers Program that accelerates the build out of high-quality town centers along major transportation routes
- Metro's Regional Transportation Plan
- Portland's "20 Minute Neighborhood" strategy to concentrate local services within walking distance to create mixed-use, vibrant and accessible neighborhoods
- City of Portland and Multnomah County's Climate Action Plan
- Portland Development Commission's Green Main Streets program to revitalize commercial districts

In addition, the EcoDistricts Initiative builds on a growing international interest in sustainable and low-carbon neighborhood development.[6]

EcoDistricts road map
(what does implementation look like?)



Performance Areas

EcoDistricts performance areas are informed by best practices in sustainable district development, international rating systems, and local expertise. Performance vision and goals are consistent across districts, while the strategies for achieving them are expected to be site specific. The complete body of standards work will be developed as part of the EcoDistricts Toolkit.[7]

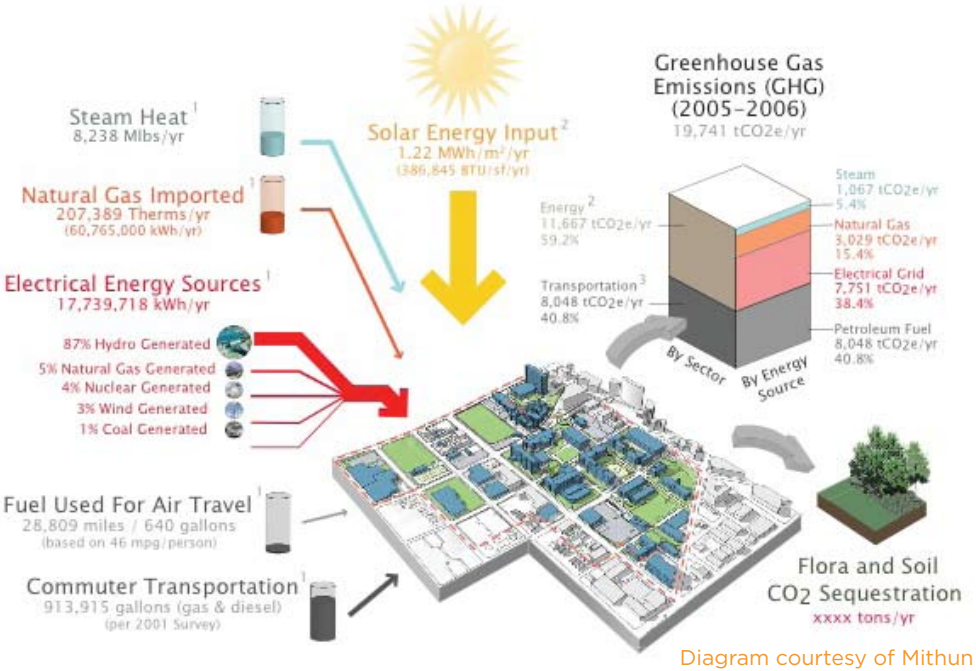


Diagram courtesy of Mithun

What does an EcoDistrict look like?

1. A place that values diversity and encourages participation
2. A place with the lowest possible environmental footprint
3. A place that supports health and wellbeing
4. A pedestrian-oriented neighborhood with access to nature and open space
5. A place that cultivates conservation and stewardship
6. A place that provides options for walking, cycling, and transit to meet basic needs

1 Community Vitality[8]

Vision: Healthy, equitable, and vital communities with active and diverse participation

Goals:

1. Human health and wellbeing are promoted through social, ecological, and built conditions
2. Benefits and burdens of investment and development are fairly distributed and promote equity and opportunity
3. Social infrastructure fosters community cohesion, inclusion, and adaptive learning and governance
4. District form and physical infrastructure supports community functionality, resilience and adaptability

2 Air Quality & Carbon

Vision: Beyond carbon neutrality and healthy air quality

Goals:

1. Minimize CO_2 emissions[9]
2. Maximize CO_2 sequestration
3. Reduce exposure to air pollutants
4. Improve indoor and outdoor air quality

3 Energy

Vision: Net-zero energy usage on an annual basis

Goals:

1. Reduce loads by minimizing demand and maximizing conservation
2. Optimize infrastructure efficiencies at all scales
3. Use renewable energy

4 Access & Mobility

Vision: Healthy, clean, and affordable transportation options

Goals:

1. Prioritize active transportation[10]
2. Reduce vehicle miles traveled
3. Achieve clean, low-carbon transportation access[11]

5 Water

Vision: A sustainable water balance between users, infrastructure and nature[12]

Goals:

1. Reduce water consumption through conservation
2. Reuse and recycle water resources, using potable water only for potable needs
3. Manage stormwater and building water discharge within the district
4. Maintain availability, reliability, and affordability of water

6 Habitat & Ecosystem Function

Vision: Integrate built and natural environments for healthy urban ecosystems

Goals:

1. Advance current and emerging watershed goals
2. Protect, regenerate, and manage habitat and ecosystem function at all scales
3. Prioritize native and structurally diverse vegetation
4. Create habitat connectivity within and beyond the district
5. Avoid human-made hazards to wildlife and promote urban design that is nature friendly

7 Materials Management

Vision: Zero waste and optimized materials management[13]

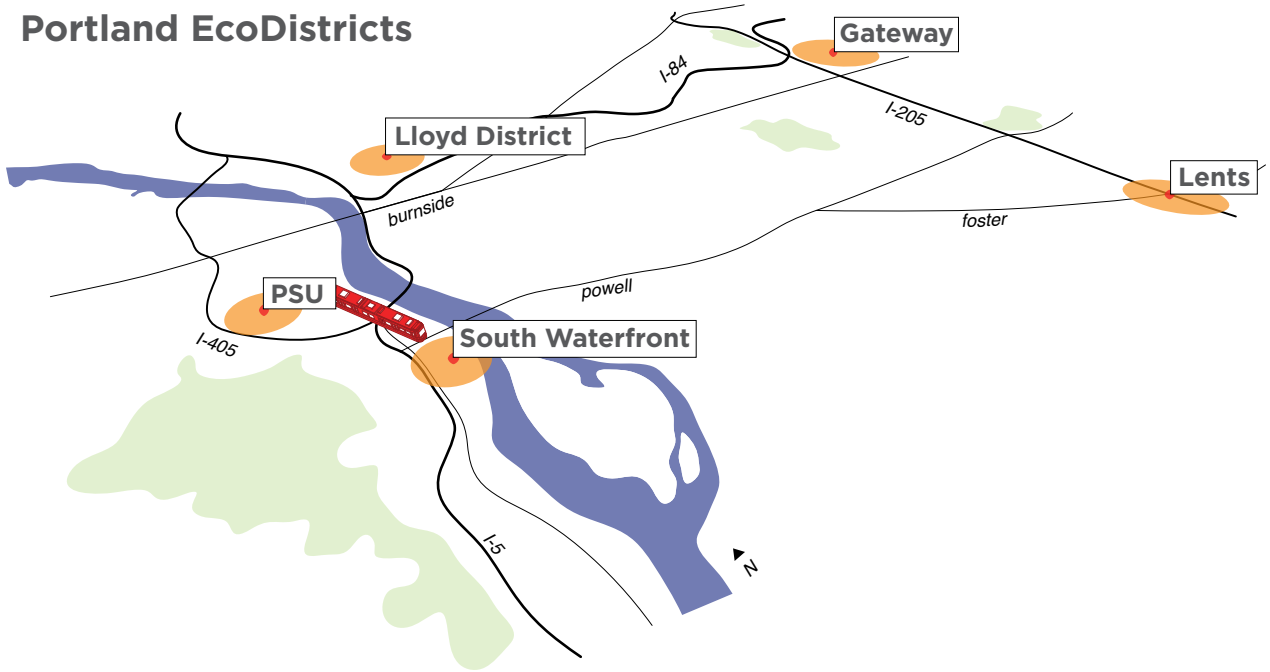
Goals:

1. Eliminate the concept of waste
2. Minimize materials use
3. Optimize materials reuse and salvage
4. Where waste prevention opportunities are limited, maximize use of products made with recycled content
5. Capture greatest residual value organic wastes (including food) through energy recovery and/or composting

III. How

Over a three-year period, PoSI is working with private-sector and community stakeholders in five pilot districts to guide community engagement, strategic planning, and investments over time.[14] To qualify, each pilot (selected for their different building typologies, community dynamics, and assets) must agree to meet rigorous performance goals. In return for participating, PoSI and its public and technical partners are providing technical and financial resources to support the EcoDistrict formation process in the five pilot districts. PoSI is actively looking to bring additional resources and organizational support to the districts.

To guide the work, PoSI is creating an EcoDistricts Toolkit that includes resources for engagement and governance; performance assessment and strategy prioritization; feasibility and project implementation; ongoing monitoring; financing mechanisms; and policy recommendations. The toolkit will continue to develop and be refined over the three-year pilot district formation process as the implementation experience captures lessons learned and creates new models for best practices.



Pilot Implementation

The EcoDistricts Toolkit and the pilot process include the following components:

1. Engagement & Governance
2. Assessment & Strategy Development
3. Feasibility & Project Implementation
4. Ongoing Monitoring

1 Engagement & Governance

Community engagement is a critical component of the EcoDistrict Initiative in order to promote long-term neighborhood stewardship and community action. To build sustained support for EcoDistricts, PoSI is developing engagement and local governance resources as part of the EcoDistricts Toolkit to help neighborhoods meet goals and initiate and manage projects over time.

A fundamental assumption of the EcoDistrict Initiative is the need for a type of "sustainability management association" (SMA), a local governing and financing entity with the explicit charge to meet EcoDistrict performance goals, guide and help finance investments, and monitor and report results over time. This entity may be a new organization or grow from an existing neighborhood or business association. PoSI will work with district stakeholders to determine the community's interest in forming an SMA and provide formation assistance as needed.

2 Assessment & Strategy Development

Comprehensive district assessment is a fundamental step to documenting the assets and performance of an EcoDistrict and making informed project decisions. In the pilot phase, each district will baseline its existing performance, evaluate site conditions, and inventory community assets to develop a corresponding implementation strategy.

To support this work, PoSI is developing resources that include metrics and protocols for setting goals, baselining performance, and prioritizing projects and community action over time.

Southeast False Creek:
Southeast False Creek's Neighbourhood Energy Utility uses sewage-waste heat recovery to provide space heating and domestic hot water to the district's new buildings.

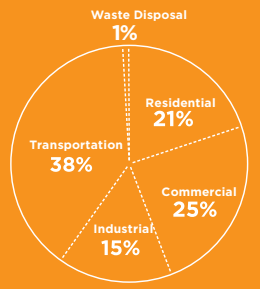
3 Feasibility & Project Implementation

EcoDistricts require new alignment and coordination between district stakeholders, public agencies and utilities to develop and finance projects at a scale that has meaningful impact. To identify promising opportunities, PoSI will lead (on behalf of and in partnership with the district stakeholders) a series of project feasibility studies based on priorities identified through the performance analysis as well as feedback from district stakeholders. Once complete, PoSI will work with district and city stakeholders to identify catalytic projects, conduct further business analysis, and develop an implementation strategy. This includes predevelopment planning, financing, partnership building, and regulatory engagement.

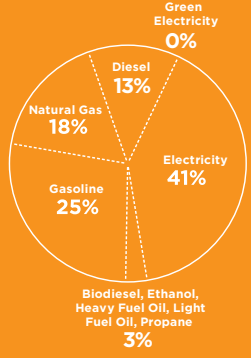
4 Ongoing Monitoring

As EcoDistricts projects are planned and built, ongoing monitoring is essential for understanding the full spectrum of social, economic and environmental impacts. The EcoDistricts Toolkit will include monitoring and verification protocols to measure district performance over time. It is expected that the district governing entity will oversee this work to report progress and shape additional investments over time.

2008 MULTNOMAH COUNTY GREENHOUSE GAS EMISSIONS BY SECTOR



2008 MULTNOMAH COUNTY GREENHOUSE GAS EMISSIONS BY FUEL SOURCE



City of Portland Bureau of Planning and Sustainability

Finance & Policy Tools

Underlying all assumptions about EcoDistricts is the ability to secure adequate project financing and align public policy support. As part of the EcoDistricts toolkit, PoSI is developing financing resources that catalogue existing and potential financing products and policy recommendations for municipalities to adopt in support of the EcoDistrict Initiative.

The financing resources will focus on district-scale financing through the different stages of project development — predevelopment, construction, and operations. It will catalog all relevant existing public and private funding streams, explore the creation of new funding mechanisms, and outline strategies for blending all forms and sources of market-rate and below-market rate capital to finance specific projects like district utilities. The toolkit will also include an overview of district-scale financing strategies including well established mechanisms like Local Improvement Districts and emerging strategies like PACE (Property Assessed Clean Energy) financing and Washington State's proposed Climate Benefit Districts.

The policy resources include a set of recommendations that will address existing barriers and incentives to EcoDistrict implementation in the areas of distributed utilities, building and zoning codes, performance disclosures, enhanced demand management, and privacy. In addition, PoSI is reviewing relevant existing and proposed policies from leading cities around the world to inform recommendations for a long-term institutionalization strategy. This work will identify key gaps and specific leadership roles that the public sector can take to support the deployment of EcoDistrict strategies.

Ekostaden Augustenborg:
In one of Sweden's largest urban sustainability projects, residents of Ekostaden Augustenborg lead the design and implementation of their neighborhood's social, environmental and economic assets.

Research & Learning Networks

To complement the EcoDistrict Initiative implementation strategy, PoSI is developing an EcoDistricts research agenda, in partnership with regional universities, to answer key questions generated in the concept and pilot district formation processes. Leveraging the expertise and enthusiasm of faculty, researchers, and students, PoSI is helping to organize the deployment of teams to work within the pilot districts and to help answer an evolving set of questions:

Key questions include:

- Is the EcoDistricts value proposition compelling enough for communities to organize in support of it?
- What types of engagement are appropriate for these very different pilot districts?
- What are the ownership implications of district utilities?
- How does individual behavior and choice factor into performance measurements?
- What strategies will support behavior changes that reduce resource consumption?

These questions and others will inform the work of academic faculty and student researchers to guide decisions around how to engage, which projects to pursue, how to invest, which technologies are market ready, and which policies must change to allow EcoDistricts implementation.

Summary

Through the three year pilot phase, PoSI expects the EcoDistricts Initiative to spark a growing interest in green neighborhood development, while significantly contributing to the growing body of work in performance baselining and analysis; neighborhood rating systems; integrated building and infrastructure technologies; and behavioral changes through demand management practices.

PoSI will create a set of neighborhood-based tools and strategies that cities throughout the region and country can use in support of their broader sustainability policy priorities around climate change, green building, mobility, watershed and ecosystems health, economic development, and community wellbeing.

Appendix I: Footnotes

[1] For the purposes of The EcoDistricts Initiative, the terms “district” and “neighborhood” are used interchangeably. Both refer to a particular scale that is the planning unit of modern cities with a spatially or community defined geography. Boundaries may include neighborhood or business association boundaries, urban renewal areas, local and business improvement districts, major redevelopment sites, watersheds, or geographic demarcations as appropriate.

[2] The Portland Sustainability Institute worked with the City of Portland Mayor’s Office, Portland Development Commission, and Bureau of Planning and Sustainability to identify the first five pilots that represent diverse neighborhood typologies and community assets. They include the Portland State University Campus, the Lloyd District, Gateway, Lents, and North Macadam.

[3] See Sustainlane City Sustainability Rankings: http://www.sustainlane.com/us-city-rankings/

[4] See Joe Cortright’s 2008 study documenting the economic benefits of land use and transportation investments, “Portland’s Green Dividend,” http://www.ceosforcities.org/files/PGD%20FINAL.pdf

[5] PDC’s 2009 economic development strategy calls out clean tech and sustainable industries as one of Portland’s four signature clusters. A Feb 2009 PDC survey lists 809 CTSI firms in the region, including 327 in Multnomah County that account for 9,817 regional jobs; 53% (5,237) in Multnomah County. Multnomah County saw CTSI earnings increase from $246M to $325M between 2001 and 2006, significantly outpacing earnings growth in the region. There are notable concentrations in wind, green building and environmental services in the City of Portland including Vestas, Iberdrola, CH2M Hill, Solar World, Solaicx, Brightworks, Gerding Edlen, Ecos, PECI, and Green Building Services. Competitive strengths include an educated labor force (talent cluster at least 50% larger than average for similar regions), access to inexpensive energy and water, tax incentives for renewable energy products, quality of life and reputation as a leader in sustainability.

[6] In December 2008, Portland Mayor Sam Adams charged PoSI with creating a roadmap and implementation strategy for EcoDistricts.

[7] A variety of green district efforts include the he Clinton Foundation’s Climate Positive program, LEED for Neighborhood Development, scale jumping in the Living Building Challenge, and One Planet Living, all of which aim to reorient design, development, and policy at the neighborhood scale.

[8] This performance area is unlike the other areas of environmental performance and was included with the recognition that its targets and metrics will be more challenging to grasp and it may become more of a viewing lens to inform project decisions in each district.

[9] Standards work, particularly targets and metrics, is still in development. Draft progress of the performance area development is available on the PoSI website: www.pdxinstitute.org.

[10] Defined as operational emissions including building energy consumption, transportation, waste generation, and construction.

[11] Active transportation refers to human-powered modes of transit including biking, walking, running, etc.

[12] For the purpose of this document “water balanced” is defined as the point where infiltration, evapotranspiration, stormwater runoff, and reuse are in harmony.

[13] Materials management is based on an EPA definition that refers to how we make choices about products as they flow through the economy, from extraction or harvest of materials and food, production and transport of goods, provision of services, reuse of materials, and, if necessary, disposal.

[14] The Portland Sustainability Institute worked with the City of Portland Mayor’s Office, Portland Development Commission, and Bureau of Planning and Sustainability to identify the first five pilots that represent diverse neighborhood typologies and community assets. They include the Portland State University Campus, the Lloyd District, Gateway, Lents, and South Waterfront.

Appendix II: Timeline

December 2008

- Launch of the EcoDistricts Initiative
- EcoDistricts visioning charrette

Spring 2009

- Formation of the Mayor's Subcabinet
- Development of preliminary white paper

Summer 2009

- Selection of 5 pilot sites in partnership with City of Portland, Portland Development Commission, and Bureau of Planning and Sustainability
- Draft framework written
- Creation of EcoDistricts Technical Advisory Committee (TAC)

Fall 2009

- First annual EcoDistricts Summit

Winter 2009/10

- Finalization of EcoDistricts Framework
- Development of performance metrics and analytics
- Development of policy, finance and governance tools
- Analysis of and planning for EcoDistrict pilot sites
- Convening of international forum on EcoDistricts best practices

Spring/Summer 2010

- Publication of white paper on policy, finance and governance tools
- Publication of performance areas and decision tool
- District utility feasibility studies and conversations
- Begin pilot district implementation
- Lloyd District formalizes Declaration of Cooperation for EcoDistricts formation

Fall 2010

- Ongoing pilot district implementation
- Second annual EcoDistricts Summit
- Begin district-wide performance baseline
- Initial project feasibility studies

2011/2012

- Formalize agreements in each pilot district
- Completion of performance baseline for each district
- Creation of EcoDistricts decision tool software platform
- Refinement of EcoDistricts toolkit
- Project feasibility studies in each of the five pilots
- Ongoing implementation
- Annual EcoDistricts Summit

Appendix III: EcoDistricts Advisors

EcoDistricts Technical Advisory Committee

Aaron Berg, Blue Tree Strategies
Alan Scott, Green Building Services
Alisa Kane, Bureau of Planning & Sustainability
Amy Ruiz, Office of Mayor Sam Adams
Andy Frichtl, Interface Engineering
Ashley Haire, OTREC
Babe O'Sullivan, Bureau of Planning & Sustainability
Bill Edmonds, NW Natural
Brad Lawless, NW Natural
Carol Mayer-Reed, Mayer/Reed
Charles Kelley, ZGF Architects
Chris Humphries, Eco Logistics
Clark Brockman, SERA Architects (TAC co-chair)
Corie Harlan, Metro
Crystal Eichner, Portland State University
Dan Vizzini, Bureau of Environmental Services
David Van't Hof, Lane Powell
Deena Platman, Metro
Dennis Wilde, Gerding Edlen Sustainable Solutions
Dianne Riley, Coalition for a Livable Future
Don Caniparoli, CH2M Hill
Eddie Campbell, Portland Water Bureau
Eden Brukman, Cascadia GBC
Elliot Allen, Criterion Planners
Eric Main, Criterion Planners
Eric Hesse, TriMet
Eric Ridenour, SERA Architects
Ethan Seltzer, Portland State University
Gregg Lande, Department of Environmental Quality
Indigo Teiwes, Earth Advantage Inc
Irene Bowers, Portland Development Commission
Janet Hammer, Portland State University
Janet Senior, Portland Water Bureau
Jeff Hammarlund, Portland State University
Jill Long, Lane Powell
Jim Johnson, Oregon Solutions
Joe Zehnder, Bureau of Planning & Sustainability
Joe Barra, Portland General Electric
Johanna Brickman, Oregon BEST
John Breshears, ZGF Architects
John MacArthur, OTREC
John Sorenson, Neighborhood Natural Energy
John Warner, Portland Development Commission
Jon Gray, Interface Engineering
Kim Voros, Alta Planning
Kipp Baratoff, Gerding Edlen Sustainable Solutions
Kristen Pennington, CH2M Hill
Lang Marsh, Oregon Solutions
Lew Bowers, Portland Development Commission
Linda Dobson, Bureau of Environmental Services
Linda George, Portland State University
Lisa Abuaf, Portland Development Commission
Lisa Libby, Office of Mayor Sam Adams
Lisa Miles, Metro
Mark Gregory, Portland State University
Megan Ponder, Office of Mayor Sam Adams
Michael Mehaffy, Structura Naturalis Inc
Michael Armstrong, Bureau of Planning & Sustainability
Mike Houck, Urban Greenspace Institute
Nicole Isle, Brightworks

Omid Nabipoor, Interface Engineering
Owen Ronchelli, Lloyd TMA
Paul Dedyo, KPFF Consulting Engineers
Paul Leistner, Office of Neighborhood Involvement
Peter Hurley, Portland Bureau of Transportation
Peter Murchie, Oregon Solutions
Rebecca Smith, DNV
Rey Espana, Native American Youth Family Center
Rick Williams, Lloyd Pilot District and Lloyd TMA
Robert Cross, Umpqua Bank
Scott Lewis, Brightworks
Sean Penrith , Earth Advantage
Stan Curtis, IBM
Steve Gutmann, Ecosecurities
Steve Cohen, Bureau of Planning & Sustainability
Tim Smith, SERA Architects
Tim O'Neal, SE Uplift
Tom Liptan, Bureau of Environmental Services
Tom Puttman, David Evans & Associates (TAC co-chair)
Troy Doss, Bureau of Planning & Sustainability
Vinh Mason, Bureau of Planning & Sustainability
Vivek Shandas, Portland State University

PoSI Staff

Adam Bartini, Graduate Research Assistant
Fletcher Beaudoin, Research Fellow
Liz Hopkins, Program and Operations Manager
Naomi Cole, Program Manager
Rob Bennett, Executive Director
Robin Fenske, Graduate Research Assistant

Mayor's EcoDistricts Sub Cabinet

Amy Cortese, New Buildings Institute
Bill Blosser, Environmental Quality Commission
Bob Sallinger, Audobon
Cora Potter, Lents Pilot District
Dan Weldon
David Knowles, CH2M Hill
Gwenn Baldwin, Baldwin Consulting
Jason King, Greenworks
Jeffrey Stuhr, Holst, Design Review
Jennifer Allen, Portland State University
Jim Desmond, Metro
Margie Harris, Energy Trust of Oregon
Mark Gregory, Portland State University Pilot District
Mark Williams, OHSU Pilot District
Michael Sestric, Institutional Facilities Coalition
Mike Houck, Urban Greenspace Institute
Nancy Stueber, OMSI
Rick Williams, Lloyd Pilot District
Robin Denburg, Windmere Community Realty
Scott Lewis, Brightworks
Ted Gilbert, Gateway Pilot District
Tom Puttman, David Evans & Associates

Appendix IV: Precedents

Project Precedents

Western Harbor Bo01 (Malmö, Sweden)
An early example of large-scale sustainable development built on a 25-acre brownfield site
http://www.malmo.se/English/Western-Harbour/Plans-and-on-going-projects/Bo01-expo-area.html

Southeast False Creek (Vancouver, British Columbia)
Waterfront project that includes the Olympic Village and will house 10-12 thousand residents
http://vancouver.ca/commsvcs/southeast/

Dockside Green (Victoria, British Columbia)
15-acre mixed-use project with plans to become the first large neighborhood development in North America to be "greenhouse gas neutral"
http://docksidegreen.com/

Ekostaden Augustenborg (Malmö, Sweden)
Launched in 1998 as one of Sweden's largest urban sustainability projects, this program empowers residents of an existing neighborhood to become leaders in the design and implementation of community projects.
http://www.malmo.se/English/Sustainable-City-Development/Augustenborg-Eco-City.html

Program Precedents

Sustainable Communities Research Program
UC Berkeley project for developing markets that includes China's EcoBlocks
http://bie.berkeley.edu/usi

EcoCity Cleveland
Urban metropolitan focus to promote environmentally-friendly redevelopment that improves quality of life and makes cities more sustainable
http://www.ecocitycleveland.org/

Living City Block
Leading demonstration of a regenerative urban center in partnership between the Rocky Mountain Institute and the City of Denver
http://www.livingcityblock.org/

Climate Benefit Districts
Neighborhood-level response that integrates the essential components of livable, climate-friendly urbanism and provides a replicable model for carbon trading markets
http://mithun.com/knowledge/article/climate_benefit_district/

Green Impact Zones
Initiative to concentrate resources (funding, coordination, and public and private partnerships) in one specific area to demonstrate that a targeted effort can transform a community
http://www.greenimpactzone.org/

Air Quality & Carbon

Climate Positive
Partnership between Clinton Climate Initiative and USGBC to support global development of large-scale urban projects demonstrating that cities can grow in ways that are "climate positive"
http://www.clintonfoundation.org/what-we-do/clinton-climate-initiative/our-approach/cities/climate-positive

Austin Climate Protection Program's "Go Neutral" Plan (Austin, TX)
Develops options for citizens, businesses, and organizations to reduce their carbon footprint through local greenhouse gas emission reduction projects
http://www.coolaustin.org/goneutral_plan.htm

Common Carbon Metric
Project of United Nations Environment Programme's Sustainable Building and Climate Initiative that intends to produce an emissions tool for the built environment that reports and verifies reductions in a consistent and comparable way
http://www.unep.org/sbci/pdfs/UNEPSBCICarbonMetric.pdf

Energy

FortZed (Fort Collins, CO)
Focus on existing neighborhoods and utility infrastructure
http://fortzed.com/

Solarize Portland (Portland, OR)
Bulk-purchasing program concept that provides cost savings for solar renewable energy systems, while also providing a knowledge-sharing forum for program participants
http://www.solarizeportland.org/index.html

St. Paul District Energy (St. Paul, MN)
The largest wood-fired Combined-Heat and Power plant in the US that provides heating or cooling to 50 million square feet
http://www.districtenergy.com/index.html

Access & Mobility

Hanoi Indicators Project (Vietnam)
Sustainable transportation indicators that allow city officials to diagnose transport issues and to develop scenarios for mitigating air pollution and traffic in the city
http://www.embarq.org/en/project/hanoi-indicators-project

Brisbane City Council School Travel Program (Australia)
Group of children walking to and/or from school with trained and approved Walk Leaders from the school community in a walking "bus"

Water

Tokyo, Japan
Leading initiative in stopping water leakage through infrastructure repair
http://www.c40cities.org/bestpractices/water/tokyo_waterworks.jsp

Austin, Texas
Comprehensive water conservation and reuse program (since 1983) that utilizes incentives, education tools and regulation
http://www.ci.austin.tx.us/watercon/

Habitat & Ecosystem Function

Sustainable Skylines (Dallas, TX)
Implementation of an urban heat island program for the City of Dallas that will decrease heated surfaces and increase the permeability of surfaces in the Dallas region
http://www.sustainableskylines.org/Dallas/heatisland.html

Urban Field Test of Green Infrastructure (Charlottesville, VA)
Funds from the Virginia Department of Forestry to create an urban green infrastructure strategy and teaching curriculum
http://www.gicinc.org/projects.htm#cville

Materials Management

Hammarby Sjostad (Stockholm, Sweden)
Pneumatic waste disposal system that separates eleven tons of food compost, paper and residual waste each day
http://www.hammarbysjostad.se/

Copenhagen's 2008 Waste Plan (Denmark)
A combination of waste prevention/separation programs and waste-to-energy plants mean that only three percent of waste is land filled
http://www.c40cities.org/bestpractices/waste/copenhagen_landfill.jsp

Recology Commercial Composting (San Francisco, CA)
Up to 75% discounts on waste collection through composting and recycling participation
http://www.recologysf.com/commercialCompost.htm

Community Vitality

Portland Fruit Tree Project (Portland, OR)
Provides access to sustainable produced foods and food production spaces, while also offering residents and workers a sense of community and cohesion
http://portlandfruit.org/

Economic Vitality Program (Boulder, CO)
Economic activities support environmental stewardship, social equity, fiscal responsibility and pathways to opportunity
http://www.bouldercolorado.gov/files/Economic%20Vitality/eco_vit_work_plan_revised_final.pdf

Landcom Social Sustainability Policy (Australia)
This Master planner of living communities pursues accommodation and access for residents and workers of diverse age, income, race, ethnicity and ability
http://www.healthyplaces.org.au/site/casestudies.php?task=show&id=25

Finance Initiatives

Green Campus Loan Fund (Harvard University, MA)
$12 Million revolving loan fund provides up-front capital for projects that reduce Harvard's environmental impact
http://www.greencampus.harvard.edu/loan-fund

Property Assessed Clean Energy (PACE) Bonds
Loans to commercial and residential property owners to finance energy retrofits repaid on property tax bills over 20 years.
http://pacenow.org

Clean Energy Works (Portland, OR)
Pilot program that offers low-interest financing to homeowners who pursue energy efficiency for their homes
http://www.cleanenergyworksportland.org/index.php

Governance Precedents

Lloyd Transportation Management Association (Portland, OR)
As a nonprofit business association, the TMA includes both public and private entities who seek to promote economic growth and a livable community through sustainable transportation strategies and services
http://www.lloydtma.com/index.html

EcoCity (Cleveland, Ohio)
Partnership between an environmental organization and a neighborhood-based development organization to develop an ecovillage project
http://www.ecocitycleveland.org/ecologicaldesign/ecovillage/history_eocvillage.html

Policy Precedents

Climate Action Plan 2009 (Portland, OR)

Cooperative city and county effort that provides a sustainability roadmap for cutting carbon emissions 80% by 2050

http://www.portlandonline.com/bps/index.cfm?c=49989&a=268612

Feed-in Tariffs (Germany)

Government guarantees with buyback rates for energy production, enabling simpler financing of renewable projects

http://www.guardian.co.uk/business/2007/jul/23/germany.greenbusiness

Mandatory CO_2 Audits (Melbourne, Australia)

Requirement for large greenhouse gas emitters to complete audits and implement sustainable actions that can be paid back within three years

http://www.c40cities.org/bestpractices/energy/melbourne_greenhouse.jsp

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Photos courtesy City of Vancouver, Anneliese Sitterly, Desirae Williams, Timothy Hursley, Zimmer Gunsul Frasca Architects, Portland Bureau of Planning & Sustainability.