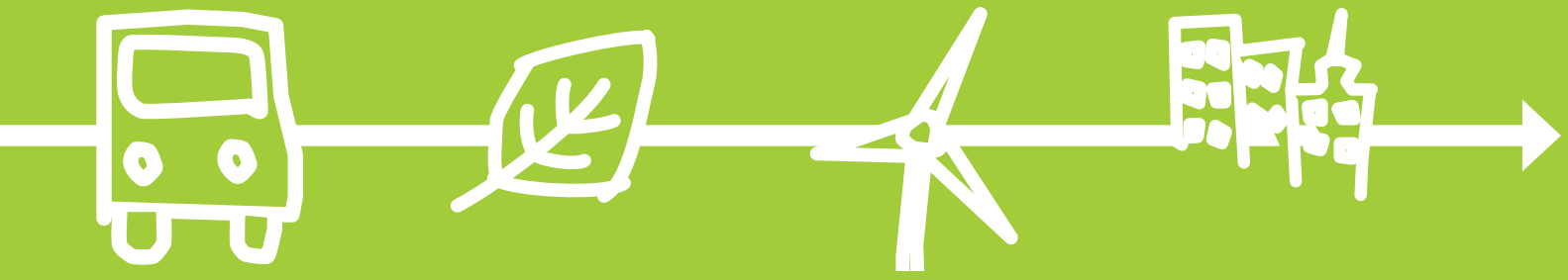
Sustainable Activity Centers



A Discussion Guide for the Region Forward Coalition
April 25th, 2014

METROPOLITAN WASHINGTON
Council of Governments

Table of Contents

Community scale systemic sustainability initiatives are emerging as a national best practice for achieving environmental sustainability, economic prosperity, and livability. The community scale affords leaders the ability to leverage economies of scale for system integration and purchasing while building on tangible connections between stakeholders. Combining an economy of scale with a sense of community helps provide both the desire and means to undertake bold efforts like achieving carbon neutrality in twenty-five years.

There are three leading approaches to community scale systemic sustainability 1)EcoDistricts which are institution led 2)private sector led 2030 Districts 3) Green Impact Zones. Recently, some communities have begun seeking approaches that integrate the strengths of each approach for even larger impacts. Next, we will delve into the characteristics of each. Followed by a look toward their implementation in our region.

First are EcoDistricts, which are typically institution led programs seeking comprehensive sustainability. These efforts are often implemented on campus or large sites held by a small number of engaged owners that are slated for large scale redevelopment. EcoDistricts often use their scale to implement large systems like district heating, which uses a central facility to very efficiently generate steam heat distributed through heavily insulated pipes to all buildings in the district. These types of systems help EcoDistricts achieve tremendous impact. This resource highlights the South West EcoDistrict in Washington DC and the Boston Innovation District, both are widely regarded as notable examples.

The second approach are 2030 Districts, a scaled implementation of the ambitious Architecture 2030 challenge to address climate change by consistently and dramatically reducing building emissions to produce economically successful carbon neutral buildings no later than 2030. 2030 Districts are private sector led initiatives that combine interested property owners to increase purchasing power, access to technical assistance, and mutual reinforcement. These districts will dramatically improve sustainability, prosperity, and livability by rapidly increasing the sustainability of existing buildings while helping new construction fulfill the most ambitious goals possible. This resource highlights the Seattle 2030 District.

Finally, Kansas City Missouri sought to capitalize on the Obama Administration's TIGER and Sustainable Communities competitive funding initiatives in a revolutionary way. They crafted a collective impact approach that brought ten funders together to invest more than $170 million dollars in a distressed community to produce catalytic changes. These investments improved transit service, pedestrian infrastructure, implemented a smart grid, weatherized homes, and launched catalytic redevelopment projects. These investments have laid the groundwork for the community to thrive under its own power.

Region Forward is an ideal framework for a regional discussion of community scale systemic sustainability because it encourages leaders to seek bold cross cutting approaches to efficiently overcome key challenges like improving air quality while reducing traffic congestion and supporting a growing economy. Activity Centers, Region Forward's spatial lense, are an excellent tool to identify places in our region where this systemic approach can be used to build on existing efforts and planned investments. Leaders from each community are encouraged to review these approaches to see if their community is a good candidate for these approaches to dramatically improve sustainability, prosperity, and livability.

Community Scale Sustainability in our Region

Local governments and institutions in the National Capital Region have already begun taking key steps to implement community scale sustainability programs. Community scale sustainability programs have been developed in Virginia, Maryland, and the District of Columbia. Additionally, a new initiative - Resilient Communities for America - is underway to promote resiliency in cities nationwide. Many of the Metropolitan Washington Council of Government's member jurisdictions have signed on including: **Washington, DC; Alexandria, VA; Arlington, VA; Gaithersburg, MD; Greenbelt, MD; and Takoma Park, MD.** These broad efforts are likely to build on trail blazing efforts to create carbon neutral townhomes in Frederick MD, an EcoDistrict in DC, LEED for Neighborhood Development in Twinbrook, and district energy in Crystal City.

Sustainable DC

Sustainable DC is an action plan designed to attract and retain 250,000 new residents and improve quality of life for existing residents in transit oriented walkable, and affordable communities. All new buildings will produce as much or more energy as they consume; existing buildings will be retrofitted to use half as much energy and water. These goals will be accomplished by starting with public review of energy performance of all buildings more than 25,000 square feet. Poor preforming buildings will be required to have energy audits. Over the mid-term all affordable housing will be retrofitted to be capable of meeting net-zero energy standards. Ultimately, all new buildings will be at least carbon neutral and hopefully net positive energy producers. This District has already begun aligning its resources to achieve this bold goal.

Go Green Virginia

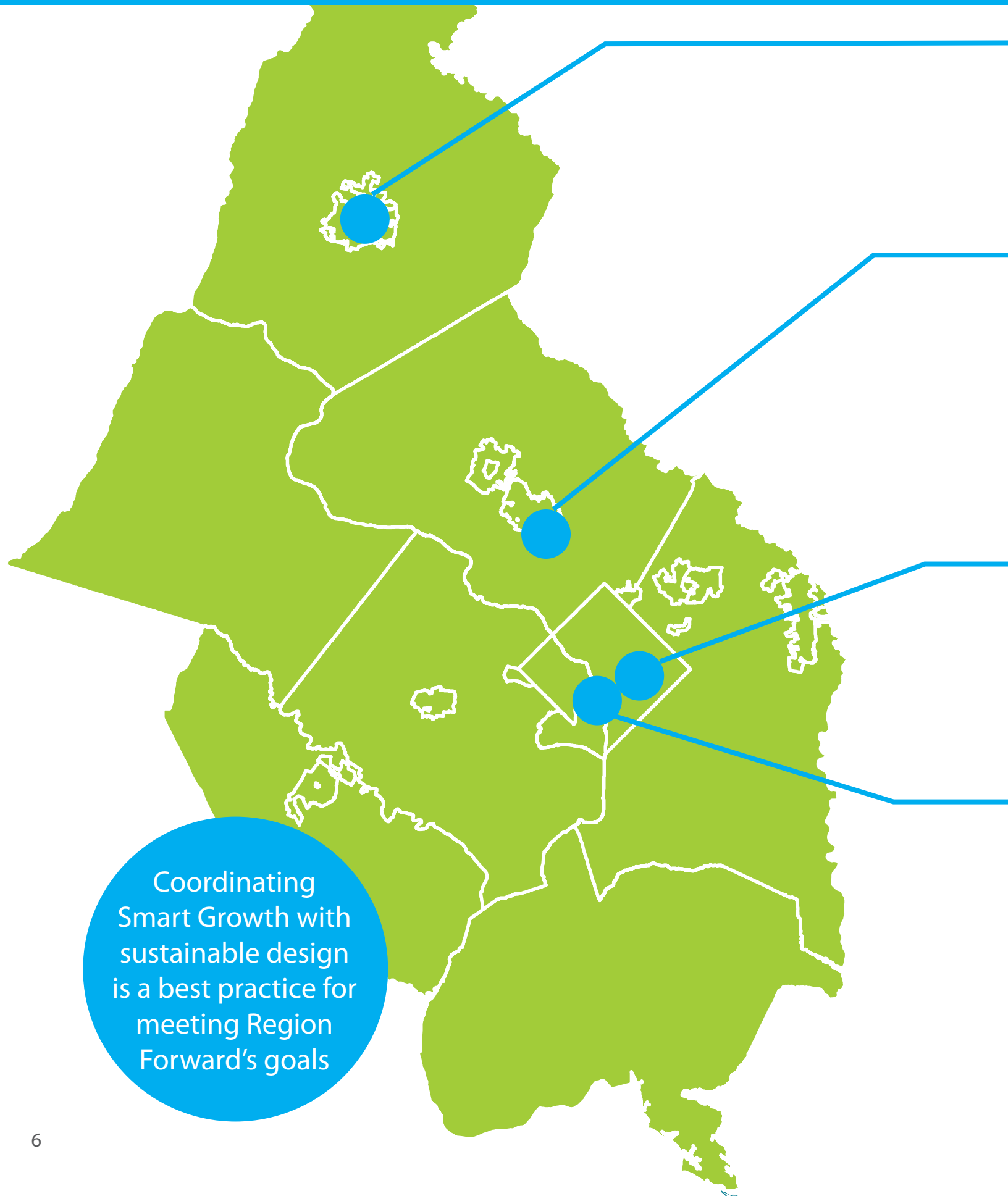
The Virginia Municipal League's (VML) Go Green Virginia initiative (Go Green Va) recognizes that communities need to take innovative steps to reduce energy usage and promote sustainability. The "Challenge" is designed to encourage implementation of specific environmental policies and practical actions that not only reduce carbon emissions, but can save local governments money. VML offers regional best practice forums that are held across the state and has a wealth of best practices and resource information online to guide local jurisdictions on implementation of actions. COG member jurisdictions that have participated include **City of Alexandria, Arlington County, City of Fairfax, and Loudoun County.**

Sustainable Maryland Certified

Sustainable Maryland Certified is a voluntary certification program that provides a menu of options to help communities invest today for a more livable tomorrow. It offers cost-effective and strategic ways to protect natural assets and revitalize communities. Sustainable Maryland Certified, an initiative of the Maryland Environmental Finance Center and Maryland Municipal League, provides tools, trainings, case studies, and other resources to municipalities working toward certification.

COG members certified under the program include **Bowie, Bladensburg, College Park, Frederick, Gaithersburg, and Rockville. Greenbelt and Takoma Park** are working toward certification. Many smaller communities in the region are also participating.

Local Best Practices



Coordinating Smart Growth with sustainable design is a best practice for meeting Region Forward's goals

Frederick, Maryland North Point Zero Energy Community

The North Point Zero Energy Community in Frederick, Maryland incorporates geothermal heating, solar roof and carport, solar electric car charger, energy management automation, airtight building envelop, HEPA air purification, ENERGY STAR appliances, materials that are locally manufactured, and more. The economics show that monthly home costs are less in the net zero energy townhomes than comparable standard townhomes because there are no energy bills. In addition, there are rebates the buyer receives for use of renewable technologies and efficient products.

Montgomery, Maryland Twinbrook Station

Twinbrook Station is the Washington area's first neighborhood development certified Gold certified the United States Green Building Council's (USGBC) LEED Neighborhood Development (LEED ND). LEED ND was engineered to inspire and help create better, more sustainable, well-connected neighborhoods. It looks beyond the scale of buildings to consider entire communities. Green building is an integral part of Twinbrook Station; over 80 percent of buildings will pursue LEED certification. Throughout the project, green operations and cleaning plans will be put in place, as well as organic gardening practices. New buildings will feature energy- and water-efficient design strategies, projected to use 30% less water than comparable conventional projects. Waste management and recycling programs throughout the development will further lower its environmental impact.

Washington, DC SW Ecodistrict

The SW Ecodistrict Initiative is a comprehensive effort to transform a 15-block federal precinct just south of the National Mall into a showcase of sustainable urban development. The SW EcoDistrict Plan examines how federal assets and natural resources can be used most efficiently and contributes to the economic vitality and environmental health of the city. The plan is a roadmap that recommends how to achieve these goals by using district-scale sustainable practices to integrate land use, transportation, and environmental planning with high performance buildings, landscapes, and infrastructure.

Arlington, Virginia Crystal City Vision

Environmental sustainability will be an integral element of all future development guided by the Crystal City Sector Plan. The vision for Crystal City as a vital, mixed-use neighborhood with increased densities and a neutral carbon balance is a vision for an environmentally sustainable place.

The Crystal City Integrated Energy Master Plan concludes that the installation of a district energy system to locally generate electricity is technically and environmentally viable. District energy systems provides, energy reliability and security, lowers building owners' energy and heating, ventilation, and air conditioning infrastructure costs, and would reduce global Green House Gas emissions by approximately 20 percent.

National Examples

Program	Stakeholders
EcoDistrict	Institutions: Local Governments; Colleges and Universities; Large Corporations
2030 District	Building Owners Managers and Developers; Professional Stakeholders; Community Stakeholders
Green Impact Zone	Federal, State and Local Governments; Utilities; Community Stakeholders
Resilient Communities for America	Federal, State and Local Governments; Utilities; Community Stakeholders

Outcomes

EcoDistricts enable systemic solutions to a wide range of challenges ranging from renewable energy generation to workforce development. EcoDistricts help align governmental and institutional redevelopment resources with other opportunities including environmental sustainability and economic development to achieve maximum impact for each investment dollar.

2030 Districts make a business case for sustainability by demonstrating how lower operating costs payoff and improve the bottom line. These districts also publicize their members accomplishments enhancing the public's perception of the organization. Working directly with the business community helps achieve results quickly by providing tools and resources to companies eager to improve their bottom line immediately. This approach has resulted in significant short-term emissions reductions.

Green Impact Zones use a collective impact approach to spark catalytic change in communities that have experienced significant disinvestment. This strategy attracts and aligns neighborhood investments to create the greatest possible quality of life impact while making long term investments in environmental sustainability and prosperity.

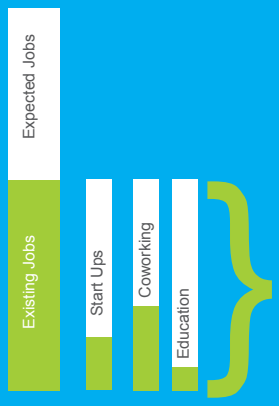
Resilient communities are better able to bounce back from disasters and disruptions in a sustainable way and maintain a good quality of life for all. Local governments can build resilience by addressing climate change preparedness, energy security, infrastructure renewal, and economic competitiveness.

Boston Innovation District

The District

The Innovation District is Boston's initiative to transform 1,000 under developed acres of the South Boston waterfront into an urban environment that fosters innovation, collaboration, and entrepreneurship.

9,000 New Jobs



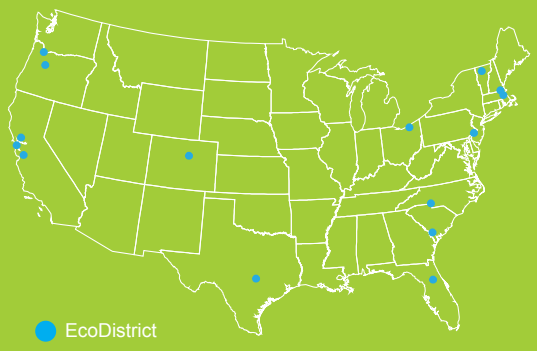
5,000 jobs have been created since 2010 with 4,000 more expected in the near future. These jobs represent an expansion of innovative small business that improve the community.

200 New Business

5,000 jobs have been created since 2010 with 4,000 more expected in the near future. These jobs represent an expansion of innovative small busniess that improve the community.

Innovation District = EcoDistrict

Boston Leaders worked with EcoDistricts, an organization based in Portland, Oregon designed to create sustainable cities from the neighborhood up. An EcoDistrict is a new model of public-private partnership that emphasizes innovation and deployment of district-scale best practices to create the neighborhoods of the future - resilient, vibrant, resource efficient and just. The EcoDistricts organization offers an incubator program that has helped eighteen cities nationwide create EcoDistricts.



1

Urban Lab

The innovation district is an opportunity to collaboratively develop and test groundbreaking technologies. Leaders are targeting clean energy, citizen participation, transportation, and social infrastructure. Successful strategies will be captured and transferred to other communities.

2

Sustainable Leadership

Boston is leveraging the immense value of iconic waterfront real estate to make ambitious investments in the area designed to improve the lives of current and future residents. To achieve the maximum benefit city leaders are working on the massive scale of 1,000 acres by partnering with several master developers simultaneously.

3

Shared Innovation

The Innovation District is a place designed to foster new industries and ways of doing business. The Innovation District is a place where entrepreneurs are developing the ideas that will propel the cities economy in the future.

EcoDistricts.org provides training and resources for communities interested in forming their own EcoDistricts

Seattle 2030 District

1 Framework for Uniting Local Efforts

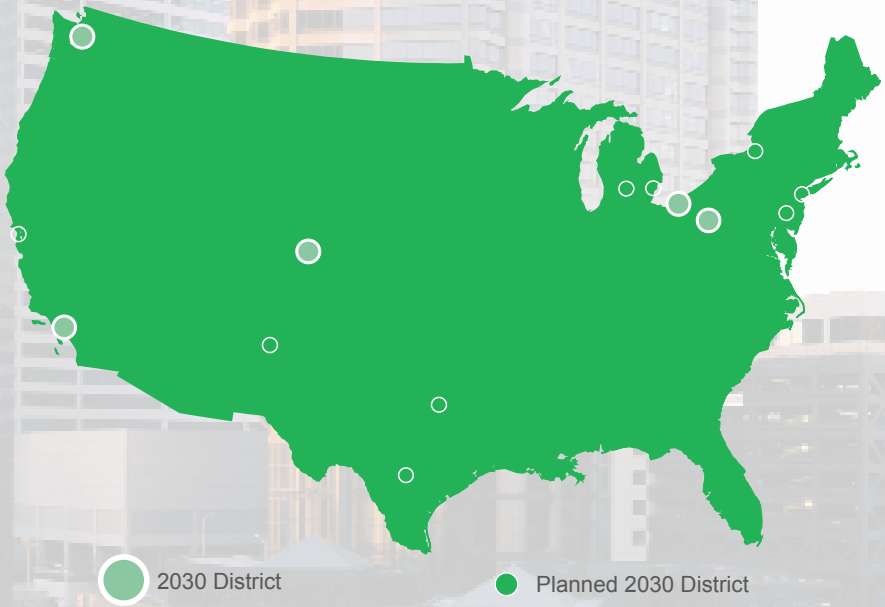
Seattle's 2030 District provides a framework for property owners, property developers, professional stakeholders, and community stakeholders to work together. There are currently 1,300 partners representing over 97 million square feet of floor space. The 2030 District provides a "one-stop shop" for financing, technical assistance, research, discounts, best practices and networking.

2 Bold Goals

2030 Districts have bold goals that lead the way to a sustainable successful future. Ultimately they seek to create communities with the lowest possible carbon emissions and water use. Community and facility investments are planned to enable existing buildings to reduce energy use, water use, and transportation emissions by at least 50% in 2030. Then, they seek to lead the way toward carbon neutrality by ensuring all new buildings are carbon neutral no later than 2030.

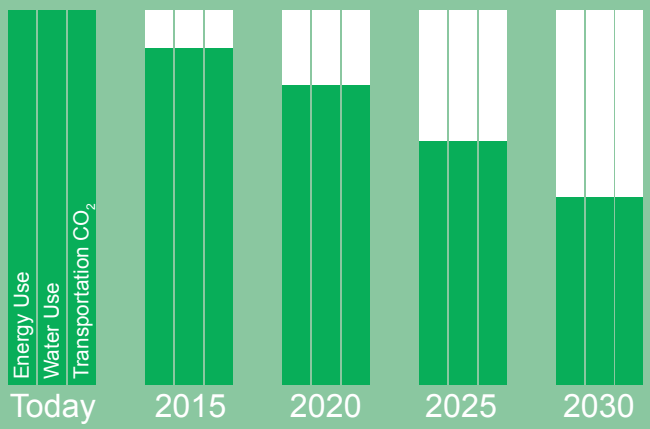
3 Replicable

Seattle 2030 was developed with the express intent of encouraging other communities to replicate their approach. Today 2030 districts can be found in four additional American cities with nine more exploring the possibility.

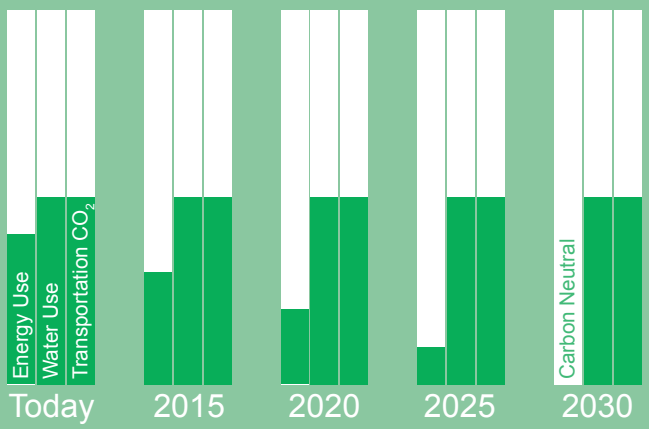


2030 Districts dramatically reduce the environmental impacts of buildings through education and collaboration

Existing Buildings Goals



New Construction Goals



Kansas City Green Impact Zone

1 Scale

Work must be done on a scale large enough to change the market in the community, with a focus on specific projects that can act as catalysts for further development.

Key Investments
- New Sidewalks (TIGER Grant)
- Smart Grid
- Affordable Housing
- Bus Rapid Transit
- Pedestrian Bridge
- Job Training
- Weatherization

Major Investment

Minor Investment

2 People and Place

Successful community redevelopment requires that the multiple causes of disinvestment be tackled simultaneously. Investment in the physical infrastructure of the community cannot bring about transformation without also investing in the human fabric of the community.

300
People trained in work skills and community leadership

80
Affordable Housing Units

2
Citizens Police Academies

329
Homes weatherized

$166

$4.2

Collective Impact

Kansas City Leveraged a $4.2 million dollar investment nearly 40 times over to bring $166 million dollars into the Green Impact Zone from 10 different funding sources.

11
Miles of new sidewalk

5
Major real estate development projects

1
Small Business & Contractor Incubator

14,000
Smart Meters Installed

3

Collaboration

Successful redevelopment requires not only empowering individuals to address issues within their own community, but also educating and informing the people and organizations who have the necessary resources and expertise to help achieve long-term, sustainable change.

Where to Start

Sustainable Activity Centers Roundtable Discussion Questions

1 What types of support can COG provide to support broader implementation of place-based sustainability initiatives?

Provide interested leaders the opportunity to learn how to implement community scale sustainability and resiliency best practices in their own communities. As a conversation starter, some options for consideration include:

- Promote September 2014 EcoDistrict Conference in Washington D.C. and host EcoDistricts Practioner and City Leader Incubator Trainings.
- Provide support/technical assistance to 2030 District Exploratory Committee(s) in interested communities.
- Encourage elected officials to sign onto Resilient Communities for America Initiative and provide support to signatories with resiliency academies/trainings.

2 What partnerships are needed to help make it happen?

As a conversation starter, general categories of stakeholders to consider include:

- Federal, State and local governments
- Property owners/managers
- Philanthropic Community
- Professional and community stakeholders
- Colleges and universities

Roundtable Discussion Notes / Ideas: