

SEATTLE'S CARBON NEUTRALITY INITIATIVE

ACHIEVING A CARBON NEUTRAL FOOD SYSTEM

Where is the fossil fuel in our food?

The fossil fuel inputs required to support our current food supply are surprising by any measure, and affect every aspect of our Seattle food equation, from households to institutions, regional small farms to big ranches, and into larger global realms of ecosystem vitality and sustainability. Viewing our local food system through the lens of carbon neutrality, our team has analyzed the various elements individually, put them into a framework that is easy to understand, and recommended a list of action items for city council, community members, organizations, institutions, and businesses.

Because the use of fossil fuels is so pervasive in our food system, it is easy to begin to reduce the overall quantities. We can achieve a true carbon-neutral food supply for Seattle through launching a marketing and education campaign, promoting new farming practices, improving access, and creating a local and seasonal food culture with its own Seattle flavor.

Through life-cycle analysis, we studied where fossil fuels and our food system intersect:

- **Farming:** Compared to non-organic farming, which uses fossil fuels in the form of fertilizers, herbicides and pesticides, organic agriculture drastically reduces fossil fuel use and significantly increases carbon sequestration in the soil¹.
- **Packaging:** Excessive plastic and cardboard packages wrap our food, while fossil fuel inputs add up in the packaging-manufacturing processes as well as in the disposal stream.
- **Transportation:** The food we eat in Seattle travels to us from all over the planet. We drive to and from the market to buy food, and garbage / recycling trucks haul away food wastes and packaging.
- **Energy:** We burn fossil fuels through refrigeration and cooking and fail to capture the energy released from composting food waste.
- **Waste:** It is estimated that as much as 40% of all food produced in the U.S. is wasted. This translates into roughly 350 million barrels of oil/year in wasted food alone. In one month, the average American family of four spends almost \$50 on food that they do not eat.²

There are numerous “cascading benefits” to building an extensive network of urban farms and preserving our regional food shed (note: food is to food shed like water is to watershed). A thriving and abundant urban and regional agriculture system will drive job creation at every level from “blue-green collar workers” such as urban farmers, edible landscapers and grey-water plumbers to “white-green collar” professionals working in urban planning, architecture or

¹ <http://www.pccnaturalmarkets.com/sc/1009/sc1009-organics.html>

² <http://www.bundle.com/everybodysmoney/average-family-wastes-600-worth-food-year-change-12401#/spending/bubbles/U.S./201003/0/0/0/100/1>

restaurant supply. It will also reduce transportation costs by supplying the hyper-local consumer with healthy and delicious seasonal choices, and by minimizing our international carbon footprint through expanding organic farms across the bioregion. Creatively expanding our local annual and perennial food crops for city consumption will have the added benefit of sequestering carbon in productive trees, shrubs, and soils.

Engaging the community

Initial outreach through the [Seattle Good Food Network](#) (SGFN), including a presentation by Councilmember O'Brien, served to reach out to the greater food community and recruit volunteers to work on developing recommendations for the city. SGFN is an open network of people and organizations including individuals, community groups, non-profits, businesses, and government that come together to support the good food movement in the Seattle area. There are currently 129 members.

A working group of 13 community volunteers³ met throughout the summer to discuss new research and suggestions on how to decrease the food system's impact on climate change. We shared these ideas with and sought feedback from the broader food-system sector via the SGFN listserv and targeted outreach to stakeholders (academics, city and county staff, farmers, food service professionals, etc). The working group then prioritized the information and cross-referenced it with the other Carbon Neutrality sector groups before developing specific policy recommendations for City Council.

Previous Initiatives

While the city has several food system-related actions and initiatives either on the books (e.g. Local Food Action Initiative, Year of Urban Agriculture) or in draft form (e.g. Food Policy Action Plan), carbon neutrality has not been the focus. Although some of our recommendations reiterate several of those elaborated by previous City actions, thereby lending support to their implementation, we have strived to suggest several unique and innovative action items not yet implemented by the City.

³ Food Systems working group volunteers: Andrea Dwyer, Ashley DeForest, Brad Holm, Carey Gersten, Carl Woestwin, Cathy Tuttle, Diana Vergis Vinh, Elaine Corets, Emily Knudsen, Genevieve Vayda, Jenny Pell, Kara Martin, and Michael Seliga.

Our Key Recommendations

The Food Systems working group developed four overarching strategies, supported by four concrete tactics with a detailed list of Action Items to implement them.

The City can immediately start working on the strategies, listed below. A table of tactics and action items follows, which we recommend the City consider as it develops a plan for a carbon neutral Seattle.

Four Overarching Strategies

1. Protect our precious farmland resources. Farmland is a finite resource; once it is converted to housing and office parks, it cannot be re-created. The City can start by adopting a new Transfer of Development Rights program where emphasis is placed on the protection of our regional food shed.

2. Expand opportunities to produce food right here in the City. This can happen simultaneously with the City working with its regional partners to protect farmland. Seattle is fortunate to have a wealth of neighborhood-based resources that lend themselves to the creation of ‘local-food nodes,’ complete with neighborhood farmers, CSAs, and community kitchens. If you pair these resources with our tremendous capacity to transform our built environment and find ways to be innovative with our infrastructure, Seattle is poised to be a model of urban food production. By weaving food into the fabric of our everyday lives, we can reduce our carbon impact while building stronger, healthier communities.

3. Implement Demand Management Tools and Educational Programs. This will ensure that the demand for local food increases proportionately to its availability. The main framework for this concept is based on the City’s current Transportation Demand Management program - Commute Seattle. Through this program the City works directly with large employers, nonprofit organizations and institutions to affect a significant change in the way people commute. We believe a similar model could be used to change the way people eat.

4. Support National Farm Bill Legislation. Seattle can have a profound impact by taking a firm stand on the farm bill, which is up for consideration in 2012. Seattle has the opportunity to lead, demonstrating how urban areas have a vested interest in creating a healthier and sustainable food system.

Tactic 1: Expand and support Seattle's food shed

Action Item	Strategic Partners	Cascading Benefits	Overlapping Sectors	Related Information
Approve a transfer of development rights (TDR) program to protect local food shed and promote sustainable farming practices	King County	Preserves green space; supports local food economy; manages growth	Land Use	King County's -FARMS Report ; - Resolution to support TDRs passed in 2009
Amend zoning code and design standards (e.g. Green Factor Program) to further incentivize food production in the built environment	N/A	Improves local food access; supports local food economy	Land Use	Phase II of DPD's food system policy
Support food production/edible landscaping on underutilized public and institutional properties (e.g. Seattle Parks and Recreation Parks and Community Centers, Public Libraries, Schools, etc.) and right-of-ways.	N/A	Improves local food access; supports local food economy	Land Use	Sustainable WA Report
Develop interim-use policy to incentivize food production on remnant or unused development sites	Development Sector	Improves local food access; supports local food economy	Land Use	Hayes Valley Farm, SF , Sustainable WA Report
Adopt guidelines for carbon sequestration that include provisions for food production	N/A	Improves local food access	Land Use	
Adopt urban village design guidelines for urban agriculture production and management	N/A	Improves local food access; supports local food economy	Land Use	
Launch and sustain an educational campaign to teach food production practices that have a low-carbon impact (e.g. discourage use of fossil-fuel derived inputs) or carbon sequestration benefit	N/A	Improves local food access	Land Use	Seattle Central Community College SAgE Program
Identify and secure an alternative funding mechanism to protect and support the food shed (e.g. Food Utility Tax)	Development and Non-Profit Sectors	Supports local food economy		
Identify private and public funding sources for innovative urban agriculture pilot projects (e.g. vertical or rooftop hydroponic systems)	Business Sector and Venture Capitalists	Supports local food economy	Green Careers	Agriculture 2.0
Assess building, energy and plumbing codes to identify restrictive policies for on-site urban agriculture production (e.g. grey water use, living building systems)	Development and Non-Profit Sectors	Improves local food access; supports local food economy	Land Use	The Urban Ag Revolution
Support infrastructure and processing facilities for local food	King County	Supports local food economy	Green Careers	Sustainable WA Report

production (e.g. wholesale produce market terminal)				
Provide inter-local agricultural support services for local farmers (e.g. marketing, economic development, low-interest loans for updated equipment or innovative agriculture/ energy projects)	Regional Partners	Supports local food economy	Green Careers	King County's -FARMS Report (pg 45)
Develop food-related business incubator program	Business and Non-Profit Sectors	Supports local food economy	Green Careers	McKinstry Innovation Center
Encourage WA State to adopt cottage laws that allow value-added home processing and selling of low-risk food items.	Business and Non-profit Sectors	Supports local food economy	Green Careers	Michigan Cottage Law

Tactic 2: Improve food access and distribution

Action Item	Strategic Partners	Cascading Benefits	Overlapping Sectors	Related Information
Define food access and conduct a city-wide assessment to identify areas with limited or no multi-modal access to a food outlet	N/A	Create more walkable communities; support local food economy; improve health	Land Use, Transp.	Mapping Food Insecurity and Access in Seattle and King County , Seattle's CPPW grant
Utilize zoning provisions to incentivize food outlets, especially in underserved areas, and to limit the establishment of fast-food chains	N/A	Create more walkable communities; support local food economy; improve health	Land Use	Phase II of DPD's food system policy
Provide financial incentives for food outlets to build in under-served areas (e.g.. additional FAR, sales tax exemption), as well as sell locally produced, sustainable food	Business and Development Sectors	Create more walkable communities; support local food economy; improve health	Land Use	New York City's FRESH Program , Healthy Retail Pays Off , Phase II of DPD's food system policy
Target pedestrian/ bike/ transit improvements in areas with limited or no multi-modal access to food outlets	N/A	Create more walkable communities; support local food economy; improve health	Transp.	Mapping Food Insecurity and Access in Seattle and King County
Encourage creation of retail grocer home/ work food-delivery service systems	Business and Non-Profit Sectors	Support local food economy; improve health	Green Careers	
Incorporate permanent farmers markets into Station Areas	N/A	Create more walkable communities; support local food economy; improve health	Land Use	

Tactic 3: Create a market for low-carbon food

Action Item	Strategic Partners	Cascading Benefits	Overlapping Sectors	Related Information
Adopt a pledge for a sustainable national food system, targeting amendments to Federal Farm Bill (akin to Seattle's 2005 Climate Protection Initiative)	Regional Partners		N/A	Climate Protection Initiative
Establish carbon-neutral food demand management program, leveraging existing TDM and CTR programs (Commute Seattle)	King County, Authorized CTR Employers	Support local food economy	N/A	Commute Trip Reduction Basics
Adopt carbon neutral procurement guidelines for city	N/A	Improve health; support local food economy	N/A	
Launch and sustain a long-term marketing and education program for carbon neutral food, including low-carbon food production and processing methods (e.g. regional organic label, pocket-size low-carbon food guidelines, etc.)	Business, Nonprofit, Educational and Institutional Sectors	Improve health; support local food economy	Neighborhoods	Low-Carbon Diet , Meatless Mondays , Eat Carbon Smart , Oregon Bounty
Use contracting powers to broaden sphere of influence (e.g. food vendors selling from city-owned property shall conform to carbon-neutral food guidelines)	N/A	Improve health; support local food economy	N/A	

Tactic 4: Reduce food-related waste and create opportunities for alternative energy sources

Action Item	Strategic Partners	Cascading Benefits	Overlapping Sectors	Related Information
Require food waste collection in multi-family residential and commercial facilities	N/A	Reduce waste, improve local soils	Land Use	
Adopt carbon neutral food packaging guidelines for city	N/A	Reduce waste	Waste	
Support the development of living building systems that utilize food	Development	Reduce waste, create alternative	Energy	

waste as an input, or alternatively produce food as an output	and Business Sectors	energy source		
Require food industry sector to collect grease and oils to be used for bio-diesel	Business Sector	Reduce waste, create alternative energy source	Waste, Energy	
Provide increased support for food rescue agencies	Business Sector	Reduce waste, improve emergency preparedness, provide a social service	Waste	
Re-purpose community centers for community grain and cold food storage, mobile abattoir, meals programs, etc.	Nonprofit Sector	Leverage existing resources	Green Careers, Neighborhoods	Mobile Meat Processing Unit
Support incubator “Community Kitchen” program (i.e. using community center and/or school infrastructure)	King County and Nonprofit Sector	Reduce energy use, build community, improve health	Green Careers, Neighborhoods	Vancouver, Fresh Choice Kitchens