



ADMINISTRATIVE REPORT

Report Date: January 5, 2011  
Contact: Sadhu Johnston  
Contact No.: 604.873.7627  
RTS No.: 08644  
VanRIMS No.: 08-2000-20  
Meeting Date: January 20, 2011

TO: Standing Committee on Planning and Environment  
FROM: Deputy City Manager and Director, Sustainability Group  
SUBJECT: Draft Greenest City 2020 Action Plan

**RECOMMENDATION**

- A. THAT Council receive the following update on the development of the Greenest City 2020 Action Plan.
- B. THAT Council adopt the following Greenest City 2020 targets as amended from the Greenest City Action Team's report *Vancouver 2020: A Bright Green Future*, which are included in Appendix 1.

**CITY MANAGER'S COMMENTS**

The City Manager recommends approval of A and B.

**COUNCIL POLICY**

In February 2010, Council adopted the long-term goals recommended by the Greenest City Action Team (GCAT) and directed staff to proceed with the development of a Greenest City 2020 Action Plan. Council approved a motion directing staff to report back on any recommended revisions to the targets laid out in the GCAT report, as well as with a report outlining how the action plans can optimize these targets. Staff also provided Council with an update as to the status of the original Quick Start actions outlined by GCAT.

In October 2009, Council received the Greenest City Action Team's report entitled *Vancouver 2020: A Bright Green Future*, which recommended ten long-term goals and thirteen 2020 targets that would chart Vancouver's course in becoming the greenest city in the world by 2020. Council approved a motion directing staff to report back with an implementation plan for the recommended actions.

In May 2009, Council received the GCAT *Quick Starts* report, which recommended early actions the City could take to help Vancouver become the greenest city by 2020. Council approved a motion directing staff to report back with an implementation plan for the recommended actions.

For many years preceding this, Council has directed staff to develop policy and plans that have been built upon in the current Greenest City work including Clouds of Change, the Community Climate Change Action Plan, EcoDensity, the Vancouver Food Charter, and others.

### ***SUMMARY***

The Greenest City staff planning team, Greenest City Steering Committee, staff Working Groups, and External Advisory Committees have been working on the development of draft Greenest City 2020 Action Plan with advice and ideas from the public through the Talk Green to Us engagement program since June 2010.

Staff Working Groups were tasked with:

- Undertaking background research;
- Identifying key stakeholder organisations that should participate in the process as External Advisory Committee (EAC) members;
- Evaluating each 2020 target and developing recommended changes in consultation with EAC;
- Developing and prioritizing potential strategies and actions;
- Integrating feedback from the broader public engagement process; and
- Preparing a draft Greenest City 2020 Action Plan, to be used for public consultation.

In addition to this, the Greenest City staff planning team, with support from Corporate Communications, implemented Phase 1 of the Greenest City public engagement program.

This report highlights some of the Greenest City actions currently underway, and outlines the process to finalize the Greenest City 2020 Action Plan for late April/early May 2011. This plan can then be incorporated into City financial and business planning processes for implementation. This report also discusses the Greenest City 2020 targets and the rationale for the recommended changes to the targets.

### ***PURPOSE***

The purpose of this report is to recommend adoption of the revised Greenest City 2020 targets, and to update Council on the process of developing the draft Greenest City 2020 Action Plan.

### ***BACKGROUND***

The Greenest City Action Team (GCAT) was launched as an advisory committee to the Mayor in February 2009 and was given a mandate to make recommendations to help Vancouver become the greenest city in the world by 2020. The team, co-chaired by Mayor Gregor Robertson and Dr. David Boyd, consists of two Council liaisons, Councillor Reimer and Councillor Cadman as well as individuals with broad experience, expertise and interest in climate protection, transportation, land use, green energy, food security, environmental health, biodiversity, economic development and finance.

The team was asked to issue two reports to Council, a 'Quick Starts' report on actions that could be implemented immediately and a comprehensive final report outlining goals and actions to be implemented over a ten year period to 2020. The Quick Starts report was received by Council on April 29, 2009 and the GCAT ten year plan report, titled "Vancouver 2020: A Bright Green Future" was received by Council on October 20, 2009.

In February 2010, Council received a staff report recommending adoption of the long-term Greenest City goals. Council approved the staffing and resources required to develop a Greenest City 2020 Implementation Plan - an actionable plan for City staff and residents to use in achieving the long-term goals. Staff were tasked with reviewing and revising the Greenest City 2020 targets, based on an analysis of how the implementation plans could optimize the targets.

### *DISCUSSION*

The Greenest City planning process is catalyzing some important work within our city. Through this integrated planning process, staff from multiple departments within the City are working together to understand the ecological, social, and economic benefits and challenges of achieving the Greenest City vision, goals, and targets. Though the plan is primarily focused on environmental issues and opportunities, strong economic development, social sustainability and equity lenses have been put on all of our work to ensure that we are considering critical sustainability issues as we move ahead with this work, and envision the future of our city. The public engagement process is enabling new conversations with a wide variety of stakeholders and community members, and is encouraging the creation of innovative new partnerships as we work toward implementation of the Greenest City 2020 Action Plan.

The following two sections provide an update on the public engagement process, as well as an update on each of the Greenest City goals, including actions that are currently underway and a brief discussion of the targets recommended for Council adoption.

### **Public Engagement**

From June 23 - October 7 2010, staff undertook Phase 1 of the greenest city public engagement process. This had two major components - the creation of the External Advisory Committee's (EACs) and the Talk Green to Us public campaign. An EAC was created for each of the 10 Greenest City goals, and ranged from 10-35 members representing key stakeholders from the academic, business and industry, non-profit, and government sectors. The City is grateful for, and appreciative of, the contributions of the more than 100 organisations that advised staff on the refinement of the Greenest City targets, as well as on the potential actions to include in the draft Greenest City 2020 Action Plan. The list of members for the EACs can be found in Appendix 2, and a list of members on the staff working groups can be found in Appendix 3.

Talk Green to Us, the public campaign, was focused on generating ideas and discussion about how the City could achieve its Greenest City goals. This phase built momentum and support behind the Greenest City vision and goals. It featured:

- Launching the engagement work through a Pecha Kucha event, with 2,000 participants;
- Developing branding materials for the Greenest City;

- Developing a short video outlining the Greenest City vision and inviting people to participate;
- Creating and moderating an on-line forum to collect ideas and comments;
- Using social media tools to encourage participation;
- Delivering several in-community events including receptions with key stakeholder groups, an Open House, and an Ideas Slam to close the consultation;
- Hosting staff lunch and learns; and
- Delivering a small advertising campaign, primarily on public transit.

Each of the 726 ideas posted on the on-line forum have been reviewed and responded to by staff and posted back on the forum (<http://www.talkgreentous.ca>), with many of these ideas being integrated into the draft Greenest City 2020 Action Plans. Below is a table that summarizes the Phase 1 engagement activities, including the number of people who participated. The quality of discussion on both the on-line forum and at the in-person events was very high.

Phase 1 Public Engagement Activities	Metric
Number of unique ideas from on-line forum	726
Number of registered users from on-line forum	3,154
Number of votes from on-line forum	28,026
Number of visitors to website	21,486
Countries visiting website	123
Percent of website visitors from Vancouver	59.5%
Total video views (GC 2020; Pecha Kucha; Lunch and Learn)	11,792
Twitter followers	2,427
Facebook fans	1,490
In person outreach at events	3,730
Direct mail (letters to community organisations)	900

Phase 2 of public consultation runs from mid-December 2010 to mid-February 2011. The campaign is called "Talk Green Vancouver" and includes a new on-line forum, social media, and a set of workshops and events designed to achieve the objectives of Phase 2 as described here:

- Collect feedback on the draft action plans
- Provide information to the community about greenest city issues and concepts
- Build support for, and ownership in, the final action plan
- Gauge level of support for specific initiatives
- Set expectations, particularly around timing of implementation
- Broaden reach into different cultural, socio-economic, and demographic groups
- Model innovation in public engagement
- Build into engagement for longer-term implementation

### Greenest City Goals, Targets and Actions Currently Underway

The Greenest City Action Team originally proposed a set of 13 targets. These were further researched by city staff and reviewed by the External Advisory Committees, resulting in the 15 targets described below. Using feedback from the public engagement process, the EACs and the staff working groups identified challenges expected in achieving the targets, as well

as an initial set of draft action plans. These draft action plans are the basis of phase 2 of consultation, as it was described above, and summary versions of these draft plans are included in Appendix 4. A summary of actions that are currently underway is included in Appendix 5.

There are currently over 60 staff actively working on developing the Greenest City 2020 Action Plan, as well as on implementing actions related to the Greenest City vision and goals. Following each of the ten goals listed below is a short summary of some exciting projects that have been initiated or completed in the last ~24 months.

In many of the Working Groups, the strong relationship between land use and density, and the goal and targets of the Working Group were discussed at length. This was a particularly robust discussion in the Green Mobility Working Group. Staff recognise the powerful role and relationship land use and density play in achieving many of the Greenest City goals and targets, and note that this will be further explored and specified in subsequent reports.



### Green Economy

Working Group Chair: John Tylee, Vancouver Economic Development Commission

Goal 1: To secure Vancouver's international reputation as a mecca of green enterprise.

#### *2020 Targets:*

Target #1 (revised): Double the number of green jobs in the City by 2020, over 2010 levels.

Target #1 (original): Create 20,000 new green jobs by 2020.

Target #2 (proposed addition): A target encouraging the greening of existing businesses and organisations is still being developed by staff, and will be recommended to Council at a later date.

#### *Actions Underway:*

- Profile green businesses during Olympics (complete)
- Clean tech trade mission to China, resulting MoU for green building showcase in Tianjin and other significant opportunities for local businesses (complete)
- Home weatherization and green jobs pilot project with EMBERS (underway)
- Building and promoting Green Capital brand (underway)
- Deconstruction pilot project (planning stage)
- Develop green economic development strategy (spring 2011)
- Deliver robust, green business retention, expansion and attraction (BREA) program, including tracking of business activities
- MoUs and collaborative efforts with global technology companies and local green enterprises to demonstrate and test technology and grow international market potential (ongoing)
- Developing business plan for green technology centre and network (underway)
- Development of Campus-City Collaborative to connect post-secondary institutions with each other and the City to work on Greenest City challenges (early 2011)

*Rationale for target change and addition*

Target #1 was revised from data collected that created a baseline for current green jobs in Vancouver, as well as the job generation potential if all of the other greenest city targets are fully implemented. Target #2 is proposed as a way to engage the businesses and organisations that are currently located in Vancouver in greening their operating practices.

Climate Leadership

Working Group Chair: Sean Pander, Sustainability Group

Goal 2: Eliminate dependence on fossil fuels.

*2020 Target:*

Revised target #1: Reduce community-based greenhouse gas emissions by 33% from 2007 levels.

Original target #1: Reduce greenhouse gas emissions 33% from 2007 levels.

*Rationale for target change*

This change clarifies the scope of what emissions reductions we are aiming to reduce (i.e. community-wide emissions, as opposed to corporate emissions or some other scope).

*Actions Underway:*

- Are on track to meet our target of 6% GHG reduction below 1990 levels by 2012 despite a 28% increase in population and 18% increase in jobs.
- Build and operate the Neighbourhood Energy Utility in South East False Creek (complete)
- Corporate climate leaders program, working with large emitters and small- medium enterprises to measure and develop action plan for energy and GHG reduction (underway)
- Offer incentives for solar thermal installations (underway)
- Working to implement additional district energy systems across the City, including one at East Fraser Lands (underway)
- Cisco and Pulse MoU partnership for improved energy management and reduction (underway)
- BC Hydro Conservation Collaborative (underway)
- Carbon neutral City operations plan (spring 2011)
- Expand landfill gas recovery, bio-gas production and utilization project (summer 2011)

Green Buildings

Working Group Co-Chairs: Will Johnston, Chief Building Official and Dave Ramslic, Sustainability Group

Goal 3: Lead the world in green building design and construction.

*2020 Targets:*

Target #1 (revised): Require all buildings constructed from 2020 onward to be carbon neutral in operations.

Target #1 (original): All new construction carbon neutral.

Target #2 (revised): Reduce energy use and GHG emissions in existing buildings by 20% over 2007 levels.

Target #2 (original): Improve energy efficiency of existing buildings by 20%.

*Rationale for target changes*

Target 1 - this change clarifies the scope of energy uses and emission sources that will be considered in the carbon neutral calculations, and limits them to energy used in building operations.

Target 2 - This change results in a more rigorous target that discourages fuel switching to low carbon energy sources (e.g. from natural gas to electricity) while still requiring an overall reduction in energy use.

*Actions Underway:*

- Green rezoning strategy requires LEED Gold certification for all new rezonings (bylaw in place)
- Published passive design toolkit and green home renovation how-to guides (2008-2009)
- Require solar-ready homes and offer incentives for solar hot water in homes (launched Jan. 2010)
- LEED-ND Platinum for Olympic Village (2010)
- First LEED Platinum certification for a community centre in Canada (Creekside, completed)
- United Nations Environment Program LivCom Award for South East False Creek(2010)
- Laneway housing policy (bylaw in place)
- Real time energy metering of venues during the Olympics and at nine City facilities (complete)
- West House display during Olympics (complete)
- Update the building code to increase energy efficiency of new buildings (underway)
- West House ongoing monitoring project (underway)
- Green building audio tours (underway)
- Van Dusen Garden building targeting Living Building Challenge and net zero energy (to be completed 2011)

Green Mobility

Working Group Co-Chairs: Jerry Dobrovolny, Director of Transportation and Brent Toderian, Director of Planning.

Goal 4: Make walking, cycling, and public transit preferred transportation options.

*2020 Targets:*

Target #1 (unchanged): Make the majority of trips (over 50%) on foot, bicycle, and public transit.

Target #2 (proposed additional target): Reduce distance driven per resident 20% from 2007 levels.

*Rationale for additional target.*

This target reflects reductions in trip distance and number of trips as this is not covered by target #1, and which speaks to improved land use decisions and directly impacts greenhouse gas emissions.

*Actions Underway:*

- Downtown separated bike lane trials (underway)
- Electric vehicle charging infrastructure including: Project Get Ready Vancouver; first to require electrical charging stations in new multi-unit residential buildings; installed first fast charging station in Canada (underway)
- Land use initiatives promoting public and active modes (i.e. Cambie Corridor Plan nearing completion; Broadway Corridor Plan underway, Neighbourhood Centres, and Community Plans)
- Update to City transportation plan (initiate Jan 2011); Cycling and pedestrian master plans (2011).
- iMIEV and LEAF launches (complete)
- Streetcar demonstration project during the Olympics (complete)



Zero Waste

Working Group Chair: Rowan Birch, Assistant City Engineer - Solid Waste

Goal 5: Create zero waste.

*2020 Target:*

Revised target #1: Reduce total solid waste going to landfill or incinerator by 50% from 2008 levels.

Original target #1: Reduce solid waste per capita going to landfill or incinerator by 40%.

*Rationale for target change*

The target was refined to align with Metro Vancouver's aspirational goal of 80% diversion by 2020, which works out to 55% less waste per capita to landfill or incinerator. The original target would have resulted in 73% diversion as compared to Metro's 80%. To convey what the per capita rate translates to relative to landfill or incinerator capacity, the proposed target is now expressed as a total waste disposed (rather than per capita), from roughly 480,000 tonnes to 240,000 tonnes by 2020.

*Actions Underway:*

- Composting in single family and duplex residences (complete); extension to additional compostable materials (2011)
- Mandated mattress recycling fee for all mattresses that are disposed of at the Vancouver transfer station or at the landfill (complete)
- Neighborhood composting pilot programs (underway)
- Distribute backyard composters (underway)
- Enhanced waste diversion for City facilities (underway)
- Pilot program for newspaper recycling on City streets (underway)



- Building deconstruction pilot program (initiate December 2010)
- Clean wood waste diversion program at Vancouver Landfill and Transfer Station (January 2011)



### Access to Nature

Working Group Co-Chairs: Tilo Driessen, Parks Board - Manager of Planning and Research and Neal Carley, Assistant City Engineer - Streets.

Goal 6: Vancouver residents enjoy incomparable access to green spaces, including the world's most spectacular urban forest.

#### *2020 Targets:*

Target #1 (unchanged): Ensure that every person lives within a 5 minute walk of a park, beach, greenway, or other natural space by 2020.

Target #2 (unchanged): Plant 150,000 additional trees in the city between 2010 and 2020.

#### *Actions Underway:*

- Increased number of community garden plots and other forms of urban agriculture - 450 community garden plots added in 2010, including a community garden at City Hall
- Increased street tree planting - over 3,200 in 2010
- Encourage planting with native plants (ongoing)
- Green streets program encouraging neighbourhood stewardship (ongoing)



### Lighter Footprint

Working Group Chair: Mairi Welman, Director of Communications

Goal 7: Achieve a one planet ecological footprint.

#### *2020 Target:*

Target (unchanged): Reduce Vancouver's per capita ecological footprint by 33% by 2020 over 2006 levels.

#### *Actions Underway:*

- Greenest City Scholars program in partnership with UBC (launched summer 2010)
- Pilot an eco-concierge program (spring 2011)
- Launch the Greenest City Mayor's Award (summer 2011)



### Clean Water

Working Group Chair: Brian Crowe, Assistant City Engineer - Water and Sewers

Goal 8: Vancouver will have the best drinking water of any city in the world.

#### *2020 Targets:*

Target #1 (revised): Meet or beat the most stringent of British Columbian, Canadian and international drinking water standards and guidelines.

Target #1 (original): Always meet or beat the strongest of B.C., Canada, and World Health Organisation drinking water standards.

Target #2: Reduce per capita water consumption by 33% over 2006 levels.

*Rationale for target change*

Target #1 was refined to achieve the loftier commitment of meeting the most stringent international water quality standards.

*Actions Underway:*

- Increase access to potable water through use of portable water stations and other activities (underway)
- Program to encourage use of rain barrels for apartments (underway)
- Explore bylaw revision to allow ticketing for illegal yard sprinkling (underway)
- Capilano filtration plant construction (underway)



Clean Air

Working Group Chair: Sean Pander, Sustainability Group

Goal 9: Breathe the cleanest air of any major city in the world.

*2020 Target:*

Target (revised): Meet or beat the most stringent of British Columbian, Canadian, and international air quality standards and guidelines.

Target (original): Always meet or beat the most stringent of World Health Organisation air quality guidelines, which are stronger than Canadian guidelines.

*Rationale for target change*

This target was refined to achieve the loftier commitment of meeting the most stringent of a broader scope of air quality guidelines and standards.

*Actions Underway:*

- Electric vehicle charging station pilot program (underway)
- Develop air quality protection plan that supports Metro Vancouver planning (summer 2011)
- Replace City waste transfer tractor trailers with cleaner fuel vehicles in partnership with Terasen (spring 2011)



Local Food

Working Group Chair: Mary Clare Zak, Director - Social Policy

Goal 10: Vancouver will become a leader in urban food systems.

*2020 Target:*

Target (revised): Increase city and neighbourhood food assets<sup>1</sup> by a minimum of 50%.

Target (original): Reduce the carbon footprint of our food by 33% per capita.

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<sup>1</sup> "Neighbourhood food assets" include: community kitchens, farmers markets, pocket markets, community food composting facilities, garden plots, community orchards, urban farms, and food hubs.

*Rationale for target change*

In researching the initial target, it was determined that carbon itself covered only part of the picture and that a truer target - reflecting the entire food system - could be created through the proactive development of local food system assets (both infrastructural and human capital), which in turn will reduce carbon and support a number of other goals.

*Actions Underway:*

- Support farm markets by making it easier to host them in all zones (complete)
- Greenest City grants for neighbourhood food projects (first grants made in 2010)
- Increased number of community garden plots and other forms of urban agriculture - 450 community garden plots added in 2010, including a community garden at City Hall
- Edible landscaping information and support program (ongoing)
- Expand street food vending program (summer-fall 2010)
- Support urban farming on city land, including SoleFood farm lease on City land (underway)
- Plant fruit trees in parks, first orchard complete Fall 2010 (underway)
- Increase food carts on public right of way including local foods (underway)
- Bee hives located on City Hall (first hives installed 2010)
- Backyard chicken bylaw (2010)
- Encourage local food in City procurement processes (Fall 2011)
- Support food business incubator (winter 2010/11)

**FINANCIAL IMPLICATIONS**

This Council Report is about integrating Greenest City targets into the City's already exemplary social, economic and cultural goals. As action and implementation plans are developed, the financial impacts and potential tradeoffs will be presented to Council for their approval through the 2012-2014 Capital Plan and the 2012 Capital and Operating budget processes. All actions currently underway have had the financial implications integrated into ongoing operational and capital budgets.

The following financial arrangements are in place to support Phase 2 of public engagement. A budget of \$173,000 for Phase 2 of public consultation will come from Vancouver's 2010 and 2011 Climate Action Rebate Incentive Program (CARIP) grant from the Province, and administered through the Sustainability Office budget.

**PERSONNEL IMPLICATIONS**

Existing staff from multiple departments are developing the draft Greenest City 2020 Action Plans, with the Greenest City Planning Team in the Sustainability Group offering coordination and support as well as delivery of the public engagement work.

**ENVIRONMENTAL IMPLICATIONS**

The development and implementation of a detailed action plan to achieve the Greenest City goals and targets will make a significant contribution to City-wide environmental performance on key issues like climate and green jobs. Some of our strategies and actions may be exportable to other industrialized, and industrializing, cities as Vancouver shares our successes and challenges along the way.

### ***SOCIAL IMPLICATIONS***

Reflecting the importance of addressing the social sphere of sustainability as integral to overall sustainability goals, the Greenest City work has applied a strong social lens to all of the ten goal areas, including: assessing job potential of different potential actions including low income and youth populations; planning to create a diversity of job types that will build a stronger local, green economy; applying a justice and affordability analysis, particularly to our climate, transportation, ecological footprint, and local food draft action plans; looking for opportunities to enable the creation of social enterprises that support greenest city goals; considering access issues in our plans (e.g. access to drinking water); and working to engage a more diverse audience in our public engagement activities both now, and throughout the implementation of the Greenest City 2020 Action Plan. Given the strong correlation between climate, transportation, sustainable and local food, access to drinking water and the city's urban health, staff are working to align Greenest City planning and Urban Health strategies.

### ***IMPLEMENTATION PLAN***

More in depth financial planning for implementation of action plans will be done in alignment with the upcoming Capital Investment Strategy, and the upcoming Capital Plan cycle for 2012-2014. Annual operating budget alignment will begin with the 2012 budget, and ongoing business planning alignment will occur as that plan is refreshed. Staff will report back to Council on Greenest City implementation as a part of those processes.

A plan for ongoing data collection, analysis and reporting out is being developed to ensure accountability of the City to its residents in achieving the Greenest City 2020 targets.

### ***COMMUNICATIONS PLAN***

An engagement and communications plan has been developed for the Greenest City 2020 Action Planning process. The engagement plan includes detailed description of the strategies and actions employed for Phase 1 and Phase 2 of the public engagement process. The communications plan describes collaboration between the Sustainability Group and Corporate Communications regarding advertising, design, creative materials, editing content, and media relations. Ongoing interdepartmental communications continue as we develop the draft action plans and begin implementation.

### ***CONCLUSION***

This report provides Council and the community with an update on the Greenest City engagement process, as well as on actions that are currently underway. Through our conversations with External Advisory Committees, the public, and other key stakeholders a rich dialogue about what the Greenest City might look like, and what it will take to get there, has been occurring throughout the City. Establishing clear and ambitious Greenest City targets as Council policy provides another key milestone in this process of becoming the Greenest City in the world by 2020.

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## Appendix 1: Recommended Greenest City targets

1. *Green Economy target:* Double the number of green jobs in the City by 2020, over 2010 levels.
2. *Climate Leadership target:* Reduce community-based greenhouse gas emissions by 33% from 2007 levels.
3. *Green Buildings targets:* #1 - Require all buildings constructed from 2020 onward to be carbon neutral in operations; #2 - Reduce energy use and greenhouse gas emissions in existing buildings by 20% over 2007 levels.
4. *Green Mobility targets:* #1 - Make the majority of trips (over 50%) on foot, bicycle, and public transit; #2 - Reduce distance driven per resident by 20% from 2007 levels.
5. *Zero Waste target:* Reduce total solid waste going to landfill or incinerator by 50%, from 2008 levels.
6. *Easy Access to Nature targets:* #1: Ensure that every Vancouver resident lives within a 5 minute walk of a park, beach, greenway, or other natural space; #2: Plant 150,000 additional trees in the city between 2010 and 2020.
7. *Lighter Footprint target:* Reduce Vancouver's per capita ecological footprint by 33% over 2006 levels.
8. *Clean Water target:* #1 - Meet or beat the strongest of British Columbian, Canadian and international drinking water quality standards and guidelines; #2 - Reduce per capita water consumption by 33% over 2006 levels.
9. *Clean Air target:* Meet or beat the most stringent of British Columbian, Canadian, and international air quality standards and guidelines.
10. *Local Food target:* Increase city and neighbourhood food assets by a minimum of 50% over 2010 levels.

## Appendix 2: Greenest City External Advisory Committee Membership

### Green Economy

Michael Weedon	BC Bioenergy
Richard Hallman	BC Innovation Council
Jennie Moore	BC Institute of Technology
Pascal Spothelfer	BC Technology Innovation Council
Lee Loftus	BC & Yukon Construction Trades Council
Wayne Peppard	BC & Yukon Construction Trades Council
Michael Heeney	Bing Thom Architects Group
Shirley Chan	Building Opportunities with Business
Wal van Lierop	Chrysalix
John Lerner	EMBERS
Marcia Nozick	EMBERS
Paul Shorthouse	Globe Foundation
Mark Holland	HB Lanarc
Bob Ingratta	LifeSciences BC
Helen Goodland	Light House Sustainable Building Centre
Gil Yaron	Light House Sustainable Building Centre
Linda Nowlan	Environmental Lawyer & Consultant
Lori Law	NRCan
Walter Wardrop	NRCan
Linda Oglov	Oglov Business Development
Heather Tremain	ReSource Rethinking Building
Paul Austin	Sustainable Development Technology Canada
Sean Markey	Simon Fraser University
James Tansey	University of British Columbia
David Berge	Vancity
Maureen Cureton	Vancity

### Climate Leadership

Eve Hou	Metro Vancouver
Joshua MacNab	Pembina Institute
Dale Littlejohn	Community Energy Association
Guy Dauncey	BC Sustainable Energy Association (BCSEA)
John Robinson	UBC
Stephen Sheppard	UBC
Kevin Millsip	Vancouver School Board
Mark Roseland	SFU
Nicholas Heap	David Suzuki Foundation
Norm Connolly	Community Energy Association
Stacey Bernier	Cdn District Energy Association
Victoria Smith	BC Hydro

Colleen Sparks	BC Climate Action Secretariat
Paul Shorthouse	Globe Foundation
Alan Boniface	
Mauricio A. Acosta	Energy & Environmental Sustainability Facilities Management, Vancouver Coastal Health
Elizabeth Sheehan	Executive Director, Climate Smart
John Turner	Terasen

### Green Buildings

Allan Francis	AIBC Sustainability Committee
Michael Blackman	APEG (Association of Professional Engineers and Geoscientists) / RJC (Read Jones Christoffersen Ltd.)
Chris Corps	Asset Strategies Ltd; Canadian Royal Institute of Chartered Surveyors
Toby Lau	Manager of Codes and Standards, BC Hydro
	BCBEC (BC Building Envelope Council) Member
John Cordonier	Bentall
Lorina Keery	Energy Conservation and Sustainability Programs, BOMA BC
Paul LaBranche	Vice President, BOMA BC
Peter Laforest	Energy and Sustainability Programs, BOMA BC
Teresa Coady	Principal, Bunting Coady Architects
Martin Nielsen	Architect, Busby, Perkins + Will
Joe Stano	GREEN UP Program Manager, CaGBC (Canada Green Building Council)
Thomas Mueller	President and CEO, CaGBC (Canada Green Building Council)
Jessica Woolliams	Director, Cascadia Green Building Council
Joel Sisolak	Cascadia Green Building Council
Mona Lemoine	Director of Education and Training, Cascadia Green Building Council
Allan Francis	CEI Architecture Planning Interiors
John Scott	Senior Partner, CEI Architecture Planning Interiors
Kevin Hydes	Engineer/Consultant, CEO Integral Group
Jennifer Sanguinetti	Director, Smart Buildings & Energy Management BC Housing
Jennie Moore	Director, Sustainable Development BCIT
Jeff Fischer	Executive Director, Urban Development Institute
Amy Spencer-Chubey	Director of Government Relations, GVHBA (Greater Vancouver Homebuilders Association)
Denisa Ionescu	Manager, Research and Education, HPO (Homeowner Protection Office)
Murray Mackinnon	Vice President of Sustainability, Canadian Contact, Ledcore
Helen Goodland (or Gil Yaron)	Executive Director, Light House Sustainable Building Centre
Trudy Rotgans	Manager, Building Policy, BC Gov
	NAIOP Vancouver (representative)

Norm Shearing	Parklane
Guido Wimmers	Passive House Institute
Jonathan Meads	Project Manager, Concert Properties
Katherine Muncaster	Province of BC
Graham Finch	RDH Building Engineering
Warren Knowles	RDH Building Engineering
Brenda Martens	Recollective
Michael Yeates	Regional Manager Business Banking, Vancity
Heather Tremain	RethinkingBuilding
Lyn Bartram	Assistant Professor, SFU SIAT (School of Interactive Arts + Technology)
John Robinson	Professor, UBC IRES (Institute for Resources, Environment and Sustainability)
Ray Cole	Professor, UBC SALA (School of Architecture + Landscape Architecture)
Juvarya Warsi	VEDC (Vancouver Economic Development Commission)
John Cordonier	Vice President of Development, Bentall
Keith Sashaw	VRCA (Vancouver Regional Construction Association)

### Green Mobility

Kevin Volk	Senior Manager, Programs Transportation Policy Branch, BC Ministry of Transportation
Raymond Kan	Senior Planner, Metro Vancouver
Greg Yeomans	Manager, Policy & Plans, TransLink
Magaret Mahan	Executive Director, Better Environmentally Sound Transportation
Keith Ippel	Executive Director, Vancouver Area Cycling Coalition
Karen Parusel	Transportation Coordinator, Vancouver Public Space Network
Adam Cooper	Program Coordinator, UBC TREK Program Centre, UBC
Larry Frank	Bombardier Chair in Sustainable Transportation, School of Community & Regional Planning, UBC
Gordon Price	Director, City Program, SFU
Kevin Millsip	Sustainability Coordinator, Vancouver School Board
Alice Miro	Project Manager, CLASP Initiative, Built Environment and Health, Heart & Stroke Foundation
Heather McKay	Vancouver Coastal Health
David Feldhaus	Vancouver Electric Vehicle Association
Mike Elwood	Chair, Electric Mobility Canada

### Zero Waste

Ruth Abramson	Corporate Manager, Environmental Sustainability, Provincial Health Services Authority
Helen Spiegelman	Coordinator, Zero Waste Vancouver



Dennis Ranahan	Sr. Engineer, Metro Vancouver
Norman Point	Mgr. Capital Projects, Musqueam Indian Band, Musqueam Reserve
Charles Gauthier	Executive Director, Downtown Vancouver BIA (DVBIA)
Kevin Millsip	Sustainability Coordinator, Vancouver School Board
Richard Taki	Regional Director, Health Protection, Vancouver Coastal Health
Jordan Best	Policy & Research Coordinator, Recycling Council Of BC
Avtar Sundher	Emergency Response Officer, Ministry of the Environment
Sam Dahabieh	Facilities Services Operations Director, SFU
Robert Weatherbe	Owner/Operator, Recycling Alternative
Louise Schwarz	Owner/Operator, Recycling Alternative

### Access to Nature

David Zandvliet	Associate Professor, Science and Environmental Education Faculty of Education Simon Fraser University
Emily Jubenvill	Greenspaces Coordinator, Vancouver Public Space Network
Andrew Appleton	Manager of Stewardship & Restoration Services, Evergreen
Dawn Hanna	Chair, Jericho Stewardship Group
Catherine Berris	BC Society of Landscape Architects
Chan, Kai	Asst Prof & Tier 2 Canada Research Chair Institute for Resources, Environment & Sustainability, UBC
Coutts, M	Nature Vancouver
Kevin Millsap	Sustainability, Vancouver School Board
Patricia Thompson	Executive Director, Stanley Park Ecology Society

### Lighter Footprint

Jennie Moore	BCIT and UBC PhD candidate
Jason Mogus	Communicopia
James Boothroyd	David Suzuki Foundation
Aftab Erfan	Deep Democracy
Alex Lau	Golden Properties
Nancy Mcharg	Hoggan and Associates - confirmed
Ruben Anderson	Metro Vancouver - Communications
Vanessa Timmer	One Earth
Emmanuel Prinet	One Earth
Bill Reese	One Earth/UBC
Janet Moore	SFU - Semester in Dialogue
Meg Holden	SFU - Urban Studies and Geography
Susanna Haas-Lyons	UBC Greenest City Conversations Project
Kevin Millsip	Vancouver School Board

**Clean Water**

Oliver Brandes	POLIS
Dr. Patricia Daly	Vancouver Coastal Health
Bob Jones	Metro Vancouver
Dr. Dirk Kirste	Simon Fraser University
Dr. Gunilla Oberg	University of British Columbia
Kirk Stinchcombe	Econnics
Dr. Tim Takaro	Simon Fraser University
Dr. Troy Vassos	NovaTech Consultants Inc.
Stan Woods	Metro Vancouver

**Clean Air**

The External Advisory Committee for the Clean Air working group consists of Metro Vancouver's stakeholders.

**Local Food**

Joanne Bays	Public Health Association of British Columbia
Brent Mansfield	Vancouver School Board
Doug Aason	Greater Vancouver Foodbank
Daryl Arnold	Commercial poultry farmer
Herb Barbolet	SFU, Centre for Sustainable Community Development and Local Food First
Maria Burglehaus	Vancouver Coastal Health
Carole Christopher	Society Promoting Environmental Conservation (SPEC)
Trish Kelly	Horizon Distributors
André LaRivière	Green Table Network
Tara McDonald	Your Local Farmers Market Society
Ross Moster	Village Vancouver
Jeff Nield	Farm Folk City Folk
Cale Price	Vancouver Chef
Janine de la Salle	Food Systems Planning, HB Lanarc
Carla S. Shore	C-Shore Communications Inc.
Yona Sipos	UBC Faculty of Land and Food Systems
Helen Spiegelman	Zero Waste Vancouver
Kim Sutherland	BC Ministry of Agriculture
David Tracey	Vancouver Community Agriculture Network (VCAN)
T'Uy'Tanat-Cease Wyss	Skwxw'u7mesh Nation

### Appendix 3: Greenest City Staff Working Groups

#### Greenest City Staff List for Working Groups

#### Green Economy

John Tylee (Chair)	VEDC
Juvarya Warsi (Staff Lead)	VEDC
Chris Clibbon	Planning
Kira Gerwing	Planning
Lee Malleau	VEDC
Jonathan Kassian	VEDC
John McPherson	VEDC

#### Climate Leadership

Sean Pander (Chair)	Sustainability
Hugo Haley (Staff Lead)	Sustainability
Brian Beck	Sustainability
Dave Ramslie	Sustainability
Malcolm Shield	Sustainability

#### Green Buildings

Will Johnston (Chair)	CBO L&I
Dave Ramslie (Chair / Staff Lead)	Sustainability
Rick Michaels	Development Services
Ron Dyck	Inspections
Sailen Black	Planning
Mark Hartman	Sustainability
Rachel Moskovic	Sustainability
Kandiah Pavananthan	Development Services
Pat Ryan	Development Services
Chris Warren	Development Services

#### Green Mobility

Jerry Dobrovolny (Chair)	Transportation
Brent Toderian (Chair)	Planning
Paul Krueger (Staff Lead)	Planning
Brian Beck	Sustainability
Dale Bracewell	Transportation
Lon LaClaire	Transportation
Neal LaMontagne	Planning
Andrew Pask	Social Policy
Jo Fung	Transportation

## Zero Waste

Rowan Birch (Chair)	Departmental Services
Chris Underwood (Staff Lead)	Solid Waste
Lynn Belanger	Solid Waste
Mani Deo	Solid Waste
Doug Robertson	Environmental Protection Branch
Catherine Kinahan	Legal Services
Monica Kosmak	Solid Waste

## Access to Nature

Tilo Driessen (Chair)	Park Board, Planning and Operations
Neal Carley (Chair)	Streets
Alan Duncan (Staff Lead)	Park Board, Research and Planning
Eileen Curran	Planning and Development
Doug Manarin	Streets
Douglas Scott	Greenways
Megan Stuart-Stubbs	Park Board, Research and Planning
Cathy Buckham	Community Planning
Andrew Pask	Social Policy
Katherine Isaac	Park Board, Planning and Operations
Ben Mulhall	Park Board, Planning and Operations
Bill Stevens	Park Board, Arboriculture
Piet Rutgers (retired)	Park Board
Amit Gandha (no longer at the City)	Park Board, Arboriculture

## Lighter Footprint

Mairi Welman (Chair)	Director of Corporate Communications
Lindsay Cole (Staff Lead)	Greenest City Planner - Sustainability
Sean Pander	Acting Manager - Sustainability Group
Joyce Uyesugi	Planner, Citywide and Regional Planning
Brenda Proskan	Deputy General Manager, Community Services
Cornelia Sussman	UBC Greenest City Scholar
Andrew Pask	Food Policy
Colin Fenby	Assistant Director, Corporate Communications
Nancy Eng	Communications Coordinator, Corporate Communications
Baldwin Wong	Multicultural Planning, Social Policy - TBC
Joseph Li	Corporate Communications
Daphne Wood	Director, Planning and Development - Vancouver Public Library
Barb Floden	Communications, Park Board

Laurie Best	Director, Web Redevelopment Project
Jennifer Bailey	Water Quality and Conservation Program Manager, Engineering
Paul Henderson	Strategic Initiatives, Engineering
Amy Fournier (on Mat leave)	Outreach Coordinator -Sustainability Group

### Clean Water

Brian Crowe (Chair)	Assistant City Engineer, Water and Sewer Division
Peter Navratil (Staff Lead)	Manager, Water Design
Andrew Ling	Sewer and Drainage Design
Carolyn Drugge	Water and Sewer Division
Piet Rutgers/Danica Djurkovi	Director of Planning and Operations, Park Board
David Ramslie	Sustainability Group (Green Buildings)
Grace Cheng	Finance
Jack Chen	Finance
Jennifer Bailey	Waterworks Design
Donny Wong	Waterworks Design

### Clean Air

Sean Pander (Chair)	Sustainability
Brian Beck (Staff Lead)	Sustainability
Malcolm Shield	Sustainability
Laurie Bates-Frymel	Metro Vancouver
Roger Quan	Metro Vancouver

### Local Food

Mary Clare Zak (Chair)	Social Policy
Andrew Pask (Staff Lead)	Social Policy
Wendy Mendes	Social Policy
Brent Toderian	Planning
Tami Gill	Planning
Rick Michaels	Development Services
Sean Pander	Sustainability
John Breckner	Real Estate Services
Scott Edwards	Transportation
Erin McDonald	Transportation
Alan Duncan	Park Board, Research and Planning
Bill Manning	Park Board, Research and Planning
Douglas Scott	Engineering
Kevin Millsip	VSB
Liane McKenna (retired)	Parks Board

## Appendix 4: Draft Greenest City 2020 Action Plan Summaries

### GC GOAL #1: GREEN ECONOMY

#### 1. GOAL

*To secure Vancouver's international reputation as a mecca of green enterprise*

#### 2. 2020 TARGET

*Proposed revision target 1: Double the number of green jobs in the City by 2020, over 2010 levels.*

*Original target 1: Create 20,000 new green jobs by 2020.*

This change results from the development of a clear definition of green jobs and a detailed baseline of existing green jobs, which is approximately 12,000.

*Proposed additional target 2: Increase the number of green workplaces (details under development)*

This additional target will enable the majority of organizations and workplaces in the City to participate in building a green economy and creating Green Capital.

#### 3. HIGHLIGHTS OF ACTIONS CURRENTLY UNDERWAY

- Launch EMBERS green jobs pilot project for home weatherization (launch complete) and launch deconstruction pilot (underway).
- Clean tech trade mission to China, resulting in MoU for green building showcase in Tianjin and other significant opportunities for local businesses (summer-fall 2010)
- MoUs and collaborative efforts with global technology companies and local green enterprises to demonstrate and test technology and grow international market potential (ongoing)

#### 4. POTENTIAL SHORT-TERM ACTIONS (1-3 yrs)

- Continue to develop a green economic development strategy, with specific strategies for each green sector, to include sector hubs and international linkages, etc.
- Deliver robust green Business Retention, Expansion and Attraction (BREA) programs including trade missions and conferences.
- Establish a Green Enterprise Zone (GEZ) in the downtown Eastside and False Creek Flats.
- Develop demonstration infrastructure projects and sector hubs for key green economy industry clusters, including use of city-owned properties (e.g. business plans underway for green data centre and network as well as food processing enterprise incubator; further research on reuse technology centre).
- Start a Green Pre-Procurement Program where staff outlines expected future projects and local firms provide information on what technologies and services are emerging locally. The information exchange prepares local firms for upcoming bids and helps city staff incorporate the latest knowledge into requests for proposals.
- Dedicate staff and resources to city-wide program for local employment, including developing targets and creation of job opportunities for key demographic groups (eg. low-income, new Canadians, etc.) and social enterprise development. Pilots to include deconstruction, weatherization and urban farming.
- Continue to strengthen 'Living Laboratory' collaborations via Campus City Collaborative ('C3') to connect post-secondary institutions, the city and green private sector firms. C3 will lead a green workforce development strategy and aligns applied research and internship programs with Vancouver's own environmental and design challenges via City U exchange program and annual green jobs symposium
- Continue to green existing businesses by providing sustainability consulting services in partnership with local organizations.

**5. LONG-TERM DIRECTION**

- Develop and deliver innovative financing mechanisms e.g. land, grants, loan funds, rebates etc.
- Dedicate resources to monitor and research Vancouver's Green Economy
- Encourage a culture of early adoption in the public sector via further demonstration projects in key green sectors including clean tech, waste technologies and food.
- Further develop global best practices in regulatory mechanisms, incentives and financing to foster green economic development and employment growth.
- Further support development of a green, local supply chain and expansion of local green businesses.
- Establish local employment programs and social enterprises with particular focus on low threshold green jobs.

**6. CHALLENGES, ISSUES, AND SIGNIFICANT MOVES**

- Work with other levels of government to increase energy and water prices and price signals for other resources, including waste and recyclables.
- Work with other levels of government, post secondary institutions and the private sector to develop a market for waste and recycled or salvaged materials.
- Engage and motivate Vancouver public sector agencies including hospitals and post secondary institutions to be green leaders in their fields, in terms of programming as well as operations.
- Engage and motivate Vancouver private sector to collaborate with each other, the City, non profits and educators to become international green leaders in their respective fields.
- Work with private sector and other public sector agencies including post secondary institutions, to create mechanisms to commoditize and export Vancouver's green expertise in integrated solutions, governance systems and policy development.

## GC GOAL #2: CLIMATE LEADERSHIP

### 1. GOAL

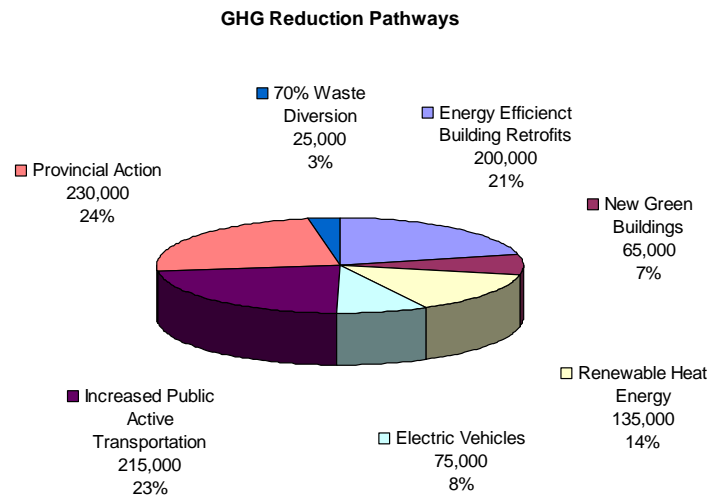
*Eliminate dependence on fossil fuels.*

### 2. 2020 TARGET

*Proposed revision: Reduce community-wide greenhouse gas emissions to 33% below 2007 levels, by 2020.*

*Original target: Reduce greenhouse gas emissions to 33% below 2007 levels by 2020.*

The above target amounts to a reduction of 1,850,000 tonnes of eCO<sub>2</sub>. Council adopted this target as policy in 2007 to be consistent with the Provincial target. While emissions as of 2008 had already been reduced to 1990 levels, maintaining the 2007 baseline will facilitate future accounting due to better data availability.



### 3. HIGHLIGHTS OF ACTIONS CURRENTLY UNDERWAY

- Launch Corporate Climate Leaders program for businesses undertaking GHG measurement and action planning work (winter 2010/11).
- Development of a climate neutral City operations plan (spring 2011).
- Expand landfill gas recovery, bio-gas production and utilization project (summer 2011).

### 4. POTENTIAL SHORT-TERM ACTIONS (1-3 YRS)

- Work with existing district energy providers to identify and facilitate switching to local, renewable energy sources.
- Advance establishment of district energy systems for all new large site developments, and implement strategies to facilitate connection of existing buildings to renewable district energy systems.
- Conduct research into a wide variety of renewable energy options for Vancouver.
- Advance the use of waste wood and other biomass resources for renewable energy production through bio-gasification or direct combustion, provided there are no significant air quality impacts and there is certainty in the sustainability of biomass supply.
- Expand capture of landfill gas from the Vancouver landfill and pilot use of bio-digester technology for biogas production from organic waste as a source of fuel for heating, power production, and transportation fuel.
- Collaborate with energy utilities to support a distributed sustainable energy utility model for installation and operations of building scale renewable energy systems such as solar thermal.
- Conduct city-wide climate change vulnerability assessment to prioritize adaptation and mitigation planning.
- Revise and expand emissions reduction measurement and performance evaluation to capture all GC 2020 Plans thereby providing a comprehensive and integrated view of GHG emissions and reduction efforts.

### 5. LONG-TERM DIRECTION

Long-term direction will be further detailed in the City's Integrated Energy Strategy, to be informed by the GC Action Plan, and including key directions below:

- **INTEGRATED ENERGY, LAND-USE, AND TRANSPORTATION PLANNING:** Plan complete, compact and mixed communities through integrated approaches to energy, land use and transportation opportunities.
- **SUSTAINABLE ENERGY SYSTEMS:** Achieve expansion and deployment of district energy systems through collaborations with other levels of government and a wide variety of industry partners.



- GREEN BUILDING STRATEGIES: Support carbon neutral new construction by 2020 through financing tools, regulatory approaches, building industry capacity and facilitating access to renewable energy.
- GREEN MOBILITY STRATEGIES: Support sustainable transportation strategies
- WASTE REDUCTION STRATEGIES: Reduce organic material directed to landfill through diversion strategies resulting in beneficial uses of material either for composting or bio-energy production.
- CLIMATE CHANGE ADAPTATION STRATEGIES: Prioritize climate change adaptation actions based on systematic research and risk assessment.

## 6. CHALLENGES, ISSUES, AND SIGNIFICANT MOVES

**Advocacy and support** for implementation of Provincial Climate and Energy Plans is critical to complement the City's Climate Leadership and GHG reduction efforts.

**Out of scope emissions** - from production of imported food products, fuel, and consumer goods, along with arriving and departing marine, rail and air transportation - need to be recognised and addressed by supporting targeted government and business initiatives; and, addressed through social marketing and education.

Transition to a low-carbon future **must be fair and just**. Beyond the potential for job creation and new employment opportunities, this transition should **not unjustly burden** vulnerable segments of society.

We must **embrace a variety of fuels, renewable energy technologies, and deployment strategies** to achieve low carbon energy objectives and emissions reductions. Implementation at both large and small scales will require aggressive adoption of best practices and pilot projects, continued fuel and technology research, strategic integration of the City's planning and operations, broad and ongoing community dialogue, and establishing and nurturing of key government and industry partnerships.

## GC GOAL #3: GREEN BUILDINGS

### 1. GOAL

*Lead the world in green building design and construction*

### 2. 2020 TARGET

*Proposed revision to target 1: Require all buildings constructed from 2020 onward to be carbon neutral in operations.*

*Original target 1: All new construction carbon neutral.*

This change clarifies the scope of energy uses and emission sources that will be considered in the carbon neutral calculations.

*Proposed revision to target 2: Reduce energy use and greenhouse gas emissions in existing buildings by 20% over 2007 levels.*

*Original target 2: Improve efficiency of existing buildings by 20%.*

This change gives us a more rigorous target that discourages fuel switching to low carbon energy sources while still requiring an overall reduction in energy use.

### 3. HIGHLIGHTS OF ACTIONS CURRENTLY UNDERWAY

- Require LEED Gold certification for all new rezonings (complete).
- Require solar-ready homes and offer incentives for solar hot water in homes (launched Jan. 2010).
- Published passive design toolkits and green home renovation how-to guides (2008-9).

### 4. POTENTIAL SHORT-TERM ACTIONS (1-3 YEARS)

The City favours a multi-disciplinary strategy that aligns regulation with incentives, financing tools, capacity building, quality assurance and user engagement in order to achieve both targets. The specific actions of this strategy and its technical details will be informed by ongoing consultation with industry, research institutions, professional associations and NGO's in same manner as this draft strategy was developed.

#### **Target 1: Require all buildings constructed from 2020 onward to be carbon neutral in operations.**

Approach: (a) First reduce actual energy demand by 50% (this reduction is in absolute terms [kwh/m2/yr] compared to a 2010 baseline) Specific building sector reduction targets will be identified by further technical analysis and review; (b) Supply remainder through renewable energy sources (e.g. renewable district heating, solar thermal, geothermal etc.).

- Regulation: create better, easier to use legislation that requires higher performing buildings at defined intervals eg. 2011, 2014, 2017, 2020.
- Incentives: Create incentive programs that invest in innovation and shared learning and reduce financial barriers to renewable energy and energy efficient design
- User Engagement, Education and Outreach Programs: develop tools that engage and educate the occupant, and encourage lifestyle choices that reduce energy demand and carbon emissions.
- Quality assurance: Optimize building performance through commissioning, measurement and verification,
- Renewable energy: Introduce minimum requirements for renewable energy (onsite production or connection to district heating system based on renewable energy source)

#### **Target 2: 20% Reduce energy use and greenhouse gas emissions in existing buildings by 20% over 2007 levels.**

Approach: Encourage energy efficiency upgrades through (a) regulation and market mechanisms (b) the development of accessible, affordable energy efficiency services and financing programs to assist the consumer in making upgrades. Note: This target refers to a 20% reduction on average across all buildings (e.g. poor performers will target >20% improvements while efficient buildings may only improve slightly)

- Capacity building: Job training programs to support growth of energy efficiency/weatherization industry
- Incentives: Create incentive programs that reduce financial barriers to building upgrades and renewable energy
- Financing tools: Implement and support financing programs that support energy efficiency upgrades to buildings
- Quality assurance: Building energy assessments and disclosure will be mandated to increase awareness of energy performance and areas of potential improvement
- Regulation: Green renovations policy to require energy efficiency improvements for all renovations and exploring mandatory abatement programs in the future

## **5. LONG-TERM DIRECTIONS**

- Cost of Green: There are real and perceived costs to building green that deter people from green construction and remediation. Financing tools and incentives are proposed to overcome these initial barriers before they are accepted as common practice and become increasingly affordable.
- Outcomes-based codes: The City will implement an energy code based on actual performance (rather than proposed or modelled performance). This requirement will be supported by financial tools to ensure affordability to contractors and will become increasingly stringent as we move toward our 2020 target.
- HVAC By-law: A new by-law will be developed to regulate the commissioning, maintenance, fuel choice or efficiency of heating, cooling and ventilation equipment in buildings.
- Building labelling: Labelling and disclosure programs provide information about the performance of buildings and how energy savings translate to cost savings. Through a pilot program Vancouver will label 1000 large residential, commercial and institutional buildings over a period of 18 months.
- Occupant engagement strategy: Educate occupants of their role in energy conservation and efficient operations

## **6. CHALLENGES, ISSUES, AND SIGNIFICANT MOVES**

- Industry Capacity: The City recognizes that in order to support the transformation of our local building industry, there needs to be adequate educational resources available to practitioners. Examples of resources include supporting the development of pilot projects, training opportunities and educational tools.
- More stringent energy efficiency regulations will have a significant impact on the development economics of Vancouver real-estate.
- The supply of renewable energy will be critical to achieving these targets so this strategy is contingent upon the success of developing a network of renewable heating energy in Vancouver
- The low cost of energy in the Province makes it very difficult to enact effective energy conservation programs.
- Reliance on BC Hydro achieving it's own carbon neutral target.

## GC GOAL #4: GREEN TRANSPORTATION

### 1. GOAL

*Make walking, cycling, and public transit preferred transportation options.*

### 2. 2020 TARGETS

*Target 1: Make the majority of trips (over 50%) on foot, bicycle, and public transit.*

*Proposed additional target 2: Reduce distance driven per resident 20% from 2007 levels.*

Proposed target 2 was added because it reflects not only improvements in mode choice, but also reductions in trip distance and number of trips—which speak to improved land use decisions and directly impact GHG emissions

### 3. HIGHLIGHTS OF ACTIONS CURRENTLY UNDERWAY

- Install downtown separated bike lane trial (Dunsmuir segment completed spring 2010; Hornby segment end of 2010).
- Install electric vehicle charging infrastructure – first fast charging station in Canada installed, others underway.
- Initiate comprehensive update to the City transportation plan (fall 2010).

### 4. POTENTIAL SHORT-TERM ACTIONS (1-3 YEARS)

- Update the city transportation plan, with direction from the GC Action Plan
- Complete a new city cycling master plan, with a mandate to make cycling a safe and mainstream transportation option that is safe, convenient, comfortable, and fun for people of all ages and abilities
- Pilot and launch programs and infrastructure to create improved pedestrian realm and vibrant public spaces (e.g. livable laneways program to make laneways safe and attractive pedestrian environments, pavement-to-plazas trial program to transform underutilized road space or on-street parking into mini-plazas or sidewalk extensions)
- Pilot a bike centre that provides secure parking and other appropriate end-of-trip amenities
- Implement a bicycle-sharing program for the Downtown and other high cycling-potential areas
- Advance land use and density strategies that support achievement of green mobility objectives
- Continue to work with partners and advocate for high-priority implementation of high capacity, fast, frequent, and reliable rapid transit for the Broadway Corridor between Commercial Drive and UBC
- Advance parking policies that encourage reduced vehicle ownership & driving, support sustainable transportation choices, & increase housing affordability (e.g. reduced minimum requirements, modest maximum allowances, unbundling of housing & parking costs)

### 5. LONG-TERM DIRECTION

Long-term directions will be further detailed as part of the city transportation plan update, cycling and pedestrian master plans, as well as supportive land use and density strategies informed by the GC Action Plan, including key directions below:

- WALKING & PUBLIC REALM: Re-imagine Vancouver's streets and public spaces to support sustainable transportation choices and build a vibrant pedestrian culture where walking is safe, convenient, and enjoyable
- CYCLING: Make cycling a desirable and mainstream transportation option that is safe, convenient, comfortable, and fun for people of all ages and abilities
- TRANSIT: Support improvements to transit to increase capacity and ensure service that is fast, frequent, reliable, fully accessible, and comfortable
- DEMAND MANAGEMENT: Advance policies that encourage reduced automobile usage and ownership
- LOW CARBON VEHICLES: Accelerate the shift to low- and zero-emissions vehicles
- URBAN GOODS MOVEMENT: Work with partners to develop a sustainable urban goods movement strategy

**6. CHALLENGES, ISSUES, AND SIGNIFICANT MOVES**

- *Need for support from outside agencies.* A significant increase in *transit capacity* is required to meet our targets, requiring support and funding from higher levels of government. Key demand-side strategies—such as *congestion pricing* and *pay-as-you-drive insurance*—also require support from TransLink and the Province.
- *Continued commitment to reallocate road space is required.* Many key actions—to improve the pedestrian realm, build a complete and attractive cycling network, improve transit capacity and reliability, and create vibrant public spaces—will require further road space reallocation from the private automobile.

## **GC GOAL #5: ZERO WASTE**

### **1. GOAL**

*Create zero waste.*

### **2. 2020 TARGET**

*Proposed revision: Reduce total solid waste going to landfill or incinerator by 50%, from 2008 levels.*

*Original target: Reduce solid waste per capita going to landfill or incinerator by 40%.*

The target was refined to match Metro Vancouver's aspirational goal of 80% diversion by 2020, which works out to 55% less waste per capita to landfill or incinerator. (The original GCAT target resulted in 73% diversion.) To convey what the per capita rate translates to relative to landfill or incinerator capacity, the proposed target is now expressed as total waste disposed, from roughly 480,000 to 240,000 tonnes by 2020.

### **3. HIGHLIGHTS OF ACTIONS CURRENTLY UNDERWAY**

- Waste diversion for City facilities (underway).
- Initiate deconstruction pilot program (initiate December 2010).
- Launch composting in single family and duplex residences (spring 2010); extend composting program (summer 2011).

### **4. POTENTIAL SHORT-TERM ACTIONS (1-3 YEARS)**

- Offer grants to seed lending libraries or sharing co-ops, managed by neighbourhood associations, social enterprises or cooperatives, where patrons can share items from tools to toys
- Form a task force with coffee companies and community stakeholders to explore and test-run takeback models for coffee cups, which could help shape a province-wide producer responsibility program
- Develop a pilot to collect food scraps from apartments, condos and schools
- Expand and enforce mandatory recycling and composting bylaw requirements for single detached homes
- Lead by example with an aggressive waste reduction program for the City's own operations
- Demonstrate a building deconstruction project with a single-family home, and develop a deconstruction policy for renovation and demolition permits
- Develop a framework for evaluating highest best use of "niche" segments of the waste stream, including reuse, recycling and conversion technologies
- Attract recycling industries to develop a locally-based, closed loop economy, aiming to create markets and develop technologies for organics, paper and future producer responsibility programs

### **5. LONG-TERM DIRECTION**

- Be a catalyst for extended producer responsibility (EPR) programs and advocate for expanding programs for packaging and hazardous waste, plus new programs for building products, carpet, furniture, and textiles
- Assess the feasibility of developing organic material conversion facilities to produce bio-gas and/or compost, at locations such as the Vancouver landfill and in district energy systems
- Explore City-coordinated collection of food scraps and other materials for the industrial, commercial, institutional sector (ICI), either through city crews, contracting out zones, franchising, product stewards, or a hybrid model
- Develop a Zero Waste certification program to spotlight businesses that meet or exceed recycling and waste reduction criteria
- Develop options for making recycling plans a condition of construction, renovation and demolition permits, ideally with financial incentives to meet diversion targets

### **6. CHALLENGES, ISSUES AND SIGNIFICANT MOVES**

The city's ability to meet the zero waste target depends on the province rolling out EPR according to the schedule in the Canada-wide plan published by the Canadian Council of Ministers of Environment. Building new facilities to handle niche materials like organics requires Metro Vancouver's authorization for the City to handle these waste

flows under the proposed new solid waste management plan, and the Corporation of Delta if built at the landfill. New or expanded by-laws may require new authority by the Province, by way of an amended *Vancouver Charter*. City-coordinated collection of organics or other materials from ICI sector and multi-unit residential buildings risks shutting out private sector haulers and interruption of third party contracts. Monitoring progress towards the target will be challenging given that waste flows across municipal boundaries and is tracked at the regional level.

## GC GOAL #6: ACCESS TO NATURE

### 1. GOAL

*Vancouver residents enjoy incomparable access to green spaces, including the world's most spectacular urban forest.*

### 2. 2020 TARGET

*Target 1: Ensure that every Vancouver resident lives within a five minute walk of a park beach, greenway, or other natural space by 2020.*

*Target 2: Plant 150,000 additional trees in the city between 2010 and 2020.*

### 3. HIGHLIGHTS OF ACTIONS CURRENTLY UNDERWAY

- Increase number of community garden plots and other forms of urban agriculture – over 450 community garden plots added in 2010, including a garden at City Hall.
- Increase number of on-street gardens cared for by residents – added 67 new green street gardens in 2010.
- Increase planting of street trees – over 3,200 street trees planted in 2010.

### 4. POTENTIAL SHORT-TERM ACTIONS (1-3 YEARS)

**Target 1: Ensure that every Vancouver resident lives within a five minute walk of a park beach, greenway, or other natural space by 2020.**

Approach: The first element is to create new parks in areas that do not meet Target 1 and that are determined as “park-deficient” by the Park Board. The second element is to complete the Council-approved network of greenways in the areas that do not meet Target 1. In some areas, the City can upgrade portions of Council-approved bikeways into greenways. The third element is to re-purpose street right-of-way (e.g. street ends, low use flankage streets) into mini-parks. The fourth element is to partner with public and private institutions (e.g. Schools, Health Care) to create publicly accessible green spaces. The short-term actions are:

- Complete detailed Access to Nature implementation plan by 2012
- Construct 10 km of new greenways by 2015
- Construct 4 mini-parks on street right-of-way (one per year for 2012-15)

**Target 2: Plant 150,000 additional trees in the city between 2010 and 2020.**

Approach: The first element is to plant 96,000 trees on City-owned property (45,000 new trees on street right-of-way; 45,000 new trees in City Parks; 6,000 new trees on other City land ). The second element is to facilitate 54,000 new trees to be planted on private property. The short-term actions are:

- Complete the Urban Forest Management Plan by 2012
- Plant 50,000 new trees on City-owned spaces by 2015
- Develop public programs to encourage new trees on private property

### 5. LONG-TERM DIRECTIONS

- Complete the network of parks in the City for all areas of the City.
- Complete the full network of Council-approved greenways.
- Create a network of mini-parks on street right-of-ways to meet neighbourhood needs for public areas, community gardens, and recreation.
- Develop a coordinated network of green spaces on private and institutional property.
- Day-light buried streams, support ecological revitalization, develop wildlife corridors, and provide wildlife habitat.



**6. CHALLENGES, ISSUES, AND SIGNIFICANT MOVES**

- Along with new trees, the City must also consider ecological diversity through under-storey plants
- Long-term care of new parks, green spaces, and trees, particularly on private property, must also be promoted rather than just the focus on planting.
- The financial resources for both capital and operating budgets to develop and maintain new green spaces may be a challenge for both the new City assets and private property improvements.

## GC GOAL #7: LIGHTER FOOTPRINT

### 1. GOAL

*Achieve a one planet ecological footprint*

### 2. 2020 TARGET

*Reduce Vancouver's per capita ecological footprint by 33% over 2006 levels*

Vancouver's draft baseline ecological footprint (using data from work in progress by J. Moore, 2010) consists of:

Component	Estimated percent of average Vancouver resident's ecological footprint
Food and beverages	35-40%
Transportation	15-20%
Consumable Items	15- 20%
Senior Government Services	10-15%
Buildings	12-15%
Waste Operations	2-5%

### 3. HIGHLIGHTS OF ACTIONS CURRENTLY UNDERWAY

- Greenest City Scholar program in partnership with UBC (launched summer 2010).
- Re-establish the Greenest City Mayors Award (summer 2011).
- Pilot an eco-concierge program (spring 2011).

### 4. POTENTIAL SHORT-TERM ACTIONS (1-3 YEARS)

- Establish and resource Greenest City Hub to implement detailed work outline in lighter footprint action plan, and in support of all other Greenest City targets.
- Explore ways to use zoning, taxes, licences, codes, permits, and other legal instruments to reduce footprint.
- Create and implement a City of Vancouver Sustainability Charter.
- Develop an in-person and on-line public engagement campaign.
- Annual monitoring and reporting on progress toward all greenest city targets.
- Pilot projects that bring together lighter footprint, local food, zero waste and green jobs targets (e.g. local food hub, neighbourhood composting).
- Pilot lighter footprint programming and branding in partnership with a BIA.
- Create Greenest City Mayor's award program and Citizens Jury.
- Pilot an eco-concierge program, focused on lifestyle choices, in partnership with building owners and operators.

### 5. LONG-TERM DIRECTIONS

The overarching strategies for the lighter footprint plan include:

- **Exemplify** lighter footprint through City of Vancouver-led policy, programs and actions
- **Engage** the public in dialogue and co-production of solutions for lighter footprint. "Engagement" means working across the spectrum of public participation including informing, consulting, involving, collaborating, and engaging.
- **Encourage and enable** lighter footprint for individuals, diverse communities, organisations, institutions and businesses through delivery of tools, programs and incentives.

### 6. CHALLENGES, ISSUES, AND SIGNIFICANT MOVES

- *Achievability of long-term goal.* There is no blueprint for transforming our modern, industrialized city to a one planet city. This goal requires system-wide changes in production methods and market signals, and social

changes in consumption habits; it is unclear whether or not a city can actually achieve a one planet footprint on its own while still being a liveable, vibrant, and just community.

- *Achievability of 2020 target.* The other greenest city goals are expected to achieve only 8-10% of the 33% ecological footprint reduction, and this is achieved primarily through the existing buildings and mobility (trip length reduction) targets. The remaining 23-25% gap must be made up by citizens, businesses and other organisations taking action on lighter footprint issues, particularly related to their food choices and consumption habits. The achievement of this target will be largely outside of the direct control of the City of Vancouver.
- *Communications and public engagement.* This plan is in service of all of the others in that it delivers the public engagement and constituency building functions. It also provides the call to action to the public, as well as the tools and information necessary for them to participate in creating the greenest city. This must be adequately resourced in order for this work to be effectively delivered.

## **GC GOAL #8: CLEAN WATER**

### **1. GOAL**

*Vancouver will have the best drinking water of any city in the world*

### **2. 2020 TARGETS**

*Proposed revision to target 1 (T1): Meet or beat the strongest of British Columbian, Canadian and international drinking water quality standards and guidelines.*

*Original target 1: Always meet or beat the strongest of B.C., Canada, and World Health Organisation drinking water standards.*

This target was refined to achieve the loftier commitment of meeting the most stringent international water quality standards.

*Target 2: Reduce per capita water consumption by 33% over 2006 levels.*

### **3. HIGHLIGHTS OF ACTIONS CURRENTLY UNDERWAY**

- Increasing access to water through use of portable water stations and other activities (currently underway).
- Distribution of apartment sized rain barrels (underway)
- Exploring bylaw revision to allow ticketing for illegal yard sprinkling (underway).

### **4. POTENTIAL SHORT-TERM ACTIONS (1-3 YEARS)**

Target 1:

- Ensure appropriate and timely water quality analysis.
- Continue infrastructure replacement and looping.
- Continue to increase public access to municipal drinking water in public spaces.

Target 2 under development, may include:

- Expansion of existing meter program to include duplex and single family residential services.
- Expansion of Sprinkling Regulation Education and Enforcement Program.
- Mandating efficient water fixtures through development and zoning and policy.
- Expanding system leak detection program and implement a pressure management system.
- Conducting a water use study at civic facilities.
- Conducting a water use study at Parks facilities.
- Developing incentive programs to accelerate installation of water efficient fixtures.
- Developing social marketing and communications plan for behaviour change.
- Conducting water audits of ICI customers and eliminate once through cooling.

### **5. LONG-TERM DIRECTION**

- Establish emerging water quality issues forum with partner agencies and universities.
- Expand the Cross Connection Control Program.
- Accelerate combined sewer separation in the areas discharging into False Creek.
- Develop an integrated rainwater management plan including infiltration and rainwater capture.

### **6. CHALLENGES, ISSUES, SIGNIFICANT MOVES**

- Bylaw amendments are required: 1) Ticket Offence by-law to include lawn watering offences, 2) Building by-law to require dual water systems.
- Substantial reductions in water consumption will likely require a full suite of solutions including full metering and pricing signals.

## GC GOAL #9: CLEAN AIR

### 1. GOAL

*Breathe the cleanest air of any major city in the world*

### 2. 2020 TARGET

*Proposed revision: Meet or beat the strongest of British Columbian, Canadian and international air quality standards and guidelines.*

*Original: Always meet or beat the most stringent of World Health Organisation air quality guidelines, which are stronger than Canadian guidelines.*

The City of Vancouver is developing strategies and actions to improve air quality standards in support of Metro Vancouver's broader efforts. The City of Vancouver has established ambient air quality objectives for ground-level ozone, inhalable and fine particulate matter, sulphur dioxide, nitrogen dioxide and carbon monoxide, many of which are in-line with the WHO guidelines.

### 3. HIGHLIGHTS OF ACTIONS CURRENTLY UNDERWAY

- Develop air quality protection plan that supports Metro Vancouver air quality planning (summer 2011).
- Partner with BC Hydro to implement an electric vehicle charging pilot program to accelerate adoption (summer 2011)
- Replace City waste transfer tractor trailers with cleaner fuel vehicles in partnership with Terasen and the BC Government (spring 2011).

### 4. POTENTIAL SHORT-TERM ACTIONS (1-3 YEARS)

#### *Motor Vehicle Strategy*

- Significantly reduce vehicle emissions by reducing the need for cars, adopting clean vehicles and implementing the efficient movement of goods.

#### *Non-Road Diesel Engine Strategy*

- Assist Metro Vancouver with promotion of the Non-Road Diesel Engine Initiative to increase participation and compliance; City of Vancouver will support adoption of these requirements in City operations and the community.

#### *Marine Vessel Strategy*

- Work with Port Metro Vancouver and BC Hydro to increase the use of shore power for ocean-going vessels calling in Vancouver.

#### *Home Wood Smoke Reduction Strategy*

- Prohibit the installation of wood burning appliances in new building construction.
- Promote Metro Vancouver's Wood Stove Exchange Program to Vancouver residents.

#### *Air Quality Improvement Strategy for Vulnerable Populations*

- Work with Metro Vancouver to ensure air-quality considerations inform land use planning.
- Develop siting guidelines to reduce high exposure to air contaminants for schools, daycares, hospitals, etc. and other sensitive populations.
- Develop possible mitigation solutions for existing locations.

### 5. LONG-TERM DIRECTION

- Create compact communities that take into account the health impacts of air quality.
- Significantly reduce engine related emissions by adopting and advocating for new technologies and solutions.

- Tackling greenhouse gas emissions will address climate change, while immediate efforts to mitigate other air contaminants will address public health concerns.

#### **6. CHALLENGES, ISSUES AND SIGNIFICANT MOVES**

- The Green Transportation Working Group is ultimately responsible for motor vehicle strategies and offers the largest single area in which air quality improvements can be made.
- Local air quality varies significantly for each pollutant. As a result, extensive research and modelling will be required by City of Vancouver partners (including Metro Vancouver) to support new regulation and programs.
- The findings of this research will inform land use planning, which is integral to the larger Greenest City goals and as a result requires significant consultation both internally and externally.
- There is a need to ensure that GHG management also provides for air-quality management.
- Given the broad impact of air quality many stakeholders will need to be engaged, including at least: Metro Vancouver, utilities, Port Metro Vancouver, transport authorities, freight carriers, the development community, health authorities, research institutions, Federal and Provincial government.

## GC GOAL #10: LOCAL FOOD

### 1. GOAL

*Vancouver will become a global leader in urban food systems.*

### 2. 2020 TARGET

*Proposed revision: Increase city and neighbourhood food assets by a minimum of 50%.*

*Original target: Reduce the carbon footprint of our food by 33% per capita.*

In researching the initial target, it was determined that carbon itself covered only part of the picture and that a truer target – reflecting the entire food system - could be created through the proactive development of local food system assets (both infrastructural and human capital), which in turn will reduce carbon and support a number of other goals.

### 3. HIGHLIGHTS OF ACTIONS CURRENTLY UNDERWAY

- Support farm markets by making it easier to host them in all types of zoning, year round (complete).
- Encourage local food in City procurement processes (fall 2011).
- Support food business incubator (winter 2010/11).

### 4. POTENTIAL SHORT-TERM ACTIONS (1-3 YEARS)

- Ensure that each neighbourhood has, as needed: sufficient emergency food services; community kitchens; a farmers market; sufficient pocket market opportunities to enable better access to healthy produce; adequate community garden plots (or other forms of urban agriculture) and, where possible, community orchard space; learning opportunities connected with food; storage facilities for foods; community composting facilities; other assets as needed.
- Support the development of a food-related incubator to assist in the establishment of food businesses.
- Develop and implement a plan to grow the number of functional, adequately supported, neighbourhood food networks that are operational in Vancouver so that every Local Area has equitable access to the resources and capacity building opportunities that they provide,
- Work with community partners to develop a directory of key local food initiatives
- Work with community partners to develop materials on nutrient dense, local, just and low-footprint healthy eating strategies
- Continue to advocate to regional and provincial governments, as well as neighbouring municipalities, to maintain the integrity of food production capacity within the Agricultural Land Reserve (ALR) and other agricultural lands.
- Create a local, sustainable, and just food procurement strategy for all City facilities
- Link together the work of Social Policy, Engineering, Parks, Real Estate and other City departments to develop an overarching municipal food policy action plan

### 5. LONG-TERM DIRECTION

- Support the creation of food infrastructure and food-related “green jobs” related to production, processing, storage, distribution, access and waste management
- Ensure that Vancouver’s food system is resilient at the neighbourhood level, and that each Local Area has equitable access to the resources needed to ensure a just and sustainable food system
- Support the compilation, brokering and dissemination of information on just and sustainable local food systems
- Ensure that the City plays a strong advocacy role in promoting food issues at a regional, provincial and national level
- Develop a coordinated municipal food policy and Action Plan

**6. CHALLENGES, ISSUES, AND SIGNIFICANT MOVES**

- The need to maintain the integrity of food producing land in the region and province.
- The need to ensure the long-term availability of land and resources to support urban agriculture and food system initiatives.
- The need to ensure as many residents as possible ‘buy in’ (literally and figuratively) to the local food projects outlined herein.



## Appendix 5: Summary of Greenest City Actions currently underway

### Green Economy actions to date:

- Profile green businesses during Olympics (complete)
- Clean tech trade mission to China, resulting MoU for green building showcase in Tianjin and other significant opportunities for local businesses (complete)
- Home weatherization and green jobs pilot project with EMBERS (underway)
- Building and promoting Green Capital brand (underway)
- Deconstruction pilot project (planning stage)
- Develop green economic development strategy (spring 2011)
- Deliver robust, green business retention, expansion and attraction (BREA) program, including tracking of business activities
- MoUs and collaborative efforts with global technology companies and local green enterprises to demonstrate and test technology and grow international market potential (ongoing)
- Developing business plan for green technology centre and network (underway)
- Development of Campus-City Collaborative to connect post-secondary institutions with each other and the City to work on Greenest City challenges (early 2011)

### Climate Leadership actions to date:

- Are on track to meet our target of 6% GHG reduction below 1990 levels by 2012 despite a 28% increase in population and 18% increase in jobs.
- Build and operate the Neighbourhood Energy Utility in South East False Creek (complete)
- Corporate climate leaders program, working with large emitters and small- medium enterprises to measure and develop action plan for energy and GHG reduction (underway)
- Offer incentives for solar thermal installations (underway)
- Working to implement additional district energy systems across the City, including one at East Fraser Lands (underway)
- Cisco and Pulse MoU partnership for improved energy management and reduction (underway)
- BC Hydro Conservation Collaborative (underway)
- Carbon neutral City operations plan (spring 2011)
- Expand landfill gas recovery, bio-gas production and utilization project (summer 2011)

### Green Buildings actions to date:

- Green rezoning strategy requires LEED Gold certification for all new rezonings (bylaw in place)
- Published passive design toolkit and green home renovation how-to guides (2008-2009)
- Require solar-ready homes and offer incentives for solar hot water in homes (launched Jan. 2010)
- LEED-ND Platinum for Olympic Village (2010)
- First LEED Platinum certification for a community centre in Canada (Creekside, completed)
- United Nations Environment Program LivCom Award for South East False Creek (2010)
- Laneway housing policy (bylaw in place)
- Real time energy metering of venues during the Olympics and at nine City facilities (complete)
- West House display during Olympics (complete)
- Update the building code to increase energy efficiency of new buildings (underway)
- West House ongoing monitoring project (underway)
- Green building audio tours (underway)
- Van Dusen Garden building targeting Living Building Challenge and net zero energy (to be completed 2011)

### Green Transportation actions to date:

- Downtown separated bike lane trials (underway)

- Electric vehicle charging infrastructure including: Project Get Ready Vancouver; first to require electrical charging stations in new multi-unit residential buildings; installed first fast charging station in Canada (underway)
- Land use initiatives promoting public and active modes (i.e. Cambie Corridor Plan nearing completion; Broadway Corridor Plan underway, Neighbourhood Centres, and Community Plans)
- Update to City transportation plan (initiate Jan 2011); Cycling and pedestrian master plans (2011).
- iMIEV and LEAF launches (complete)
- Streetcar demonstration project during the Olympics (complete)

**Zero Waste actions to date:**

- Composting in single family and duplex residences (complete); extension to additional compostable materials (2011)
- Mandated mattress recycling fee for all mattresses that are disposed of at the Vancouver transfer station or at the landfill (complete)
- Neighborhood composting pilot programs (underway)
- Distribute backyard composters (underway)
- Enhanced waste diversion for City facilities (underway)
- Pilot program for newspaper recycling on City streets (underway)
- Building deconstruction pilot program (initiate December 2010)
- Clean wood waste diversion program at Vancouver Landfill and Transfer Station (January 2011)

**Access to Nature actions to date:**

- Increased number of community garden plots and other forms of urban agriculture - 450 community garden plots added in 2010, including a community garden at City Hall
- Increased street tree planting - over 3,200 in 2010
- Encourage planting with native plants (ongoing)
- Green streets program encouraging neighbourhood stewardship (ongoing)

**Lighter Footprint actions to date:**

- Greenest City Scholars program in partnership with UBC (launched summer 2010)
- Pilot an eco-concierge program (spring 2011)
- Launch the Greenest City Mayor's Award (summer 2011)

**Clean Water actions to date:**

- Increase access to potable water through use of portable water stations and other activities (underway)
- Program to encourage use of rain barrels for apartments (underway)
- Explore bylaw revision to allow ticketing for illegal yard sprinkling (underway)
- Capilano filtration plant construction (underway)

**Clean Air actions to date:**

- Electric vehicle charging station pilot program (underway)
- Develop air quality protection plan that supports Metro Vancouver planning (summer 2011)
- Replace City waste transfer tractor trailers with cleaner fuel vehicles in partnership with Terasen (spring 2011)

**Local Food actions to date:**

- Support farm markets by making it easier to host them in all zones (complete)
- Greenest City grants for neighbourhood food projects (first grants made in 2010)
- Increased number of community garden plots and other forms of urban agriculture - 450 community garden plots added in 2010, including a community garden at City Hall
- Edible landscaping information and support program (ongoing)

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- Expand street food vending program (summer-fall 2010)
  - Support urban farming on city land, including SoleFood farm lease on City land (underway)
  - Plant fruit trees in parks, first orchard complete Fall 2010 (underway)
  - Increase food carts on public right of way including local foods (underway)
  - Bee hives located on City Hall (first hives installed 2010)
  - Backyard chicken bylaw (2010)
  - Encourage local food in City procurement processes (Fall 2011)
  - Support food business incubator (winter 2010/11)