



Office of the City Clerk

D. Back, City Clerk
K. O'Connell, Deputy City Clerk

INTER-OFFICE MEMORANDUM

TO: CHAIR AND MEMBERS
SOCIAL PLANNING COMMITTEE

DATE: 2016 MARCH 08

FROM: CITY CLERK

FILE: 76500-01

**SUBJECT: ENVIRONMENTAL SUSTAINABILITY STRATEGY
DRAFT REPORT AND PHASE 3 PUBLIC CONSULTATION
(ITEM NO. 7(01), MANAGER'S REPORTS, COUNCIL 2016 MARCH 07)**

Burnaby City Council, at the Open Council meeting held on 2016 March 07, received the above noted report and adopted the following recommendations contained therein:

1. **THAT** Council authorize staff to undertake the third and final phase of the public consultation program to seek response to the *Draft Burnaby Environmental Sustainability Strategy (ESS) Report*, as outlined in Section 5 of this report.
2. **THAT** Council authorize staff to undertake public consultation on the *Draft Burnaby Community Energy and Emissions Plan (CEEP)*, as outlined in Section 6 of this report, as a supporting component of the third and final phase of ESS public consultation.
3. **THAT** Council send a copy of this report to the Environment Committee, the Planning and Development Committee, the Social Planning Committee, the Transportation Committee, and the Parks, Recreation and Culture Commission for their information.

Dennis Back
City Clerk

DB:nv

TO: CITY MANAGER **DATE:** 2016 February 24

FROM: DIRECTOR PLANNING AND BUILDING **FILE:** 76500 20
Ref: ESS

**SUBJECT: ENVIRONMENTAL SUSTAINABILITY STRATEGY
DRAFT REPORT AND PHASE 3 PUBLIC CONSULTATION**

PURPOSE: To initiate public consultation on the *Draft Burnaby Environmental Sustainability Strategy (ESS) Report* and initiate public consultation on the *Draft Burnaby Community Energy and Emissions Plan (CEEP)*.

RECOMMENDATIONS:

1. **THAT** Council authorize staff to undertake the third and final phase of the public consultation program to seek response to the *Draft Burnaby Environmental Sustainability Strategy (ESS) Report*, as outlined in Section 5 of this report.
2. **THAT** Council authorize staff to undertake public consultation on the *Draft Burnaby Community Energy and Emissions Plan (CEEP)*, as outlined in Section 6 of this report, as a supporting component of the third and final phase of ESS public consultation.
3. **THAT** Council send a copy of this report to the Environment Committee, the Planning and Development Committee, the Social Planning Committee, the Transportation Committee, and the Parks, Recreation and Culture Commission for their information.

REPORT

1.0 INTRODUCTION

The *Burnaby Environmental Sustainability Strategy (ESS)* is being advanced on the initiative of the Mayor and Council to ensure that Burnaby will continue to show regional, national and international leadership in the development of exemplary sustainability programs and initiatives, guided by its integrated social, environmental and economic strategies.

The purpose of this report is to summarize the highlights of the first two phases of ESS public consultation (“*Issues and Priorities*”; and “*Exploring Further*”), to present an overview of the *Draft ESS Report*, and to seek Council approval to undertake the third and final phase of public consultation (“*Draft ESS*”), which is proposed to include consultation on Burnaby’s *Draft Community Energy and Emissions Plan (CEEP)* as a supporting element.

2.0 THE ESS

The ESS is intended to set directions for environmental protection, stewardship, enhancement, and resilience in the city. The ESS, together with the award winning *Social Sustainability Strategy* (SSS) completed and adopted in 2011, and the award-winning *Economic Development Strategy* (EDS) completed and adopted in 2007, will help to define how the city can evolve and build on its strengths, to become an even more vibrant, resilient and sustainable community, integrated with healthy ecosystems.

The ESS process, previously approved by Council at its meeting of 2011 November 7, is updated as shown in **Attachment 1**. Step 14, the *Draft ESS Report* has now been created and the process is nearing completion.

Sharing the *Draft ESS Report* and the supporting *Draft Burnaby Community Energy and Emissions Plan* (CEEP) with the broader community as part of the Phase 3 public consultation, Step 15, is the subject of this report.

2.1 ESS Process Overview

On 2013 May 13, Council approved the three phase public consultation framework for the ESS.

Led by the Mayor's ESS Steering Committee, the ESS process is one of the largest and most creative public consultation programs the City has ever undertaken. The ESS timeline and a summary of the three phases of the ESS **process** can be found in **Attachment 2**. The three phases of ESS **public consultation** are summarized below.

- Phase 1 – *Issues and Priorities (May to July 2013)*

The first phase of engagement focused on raising awareness, identifying key issues and opportunities, developing the vision and building interest and support from the very beginning.

- Phase 2 – *Exploring Further (March to July 2014)*

The second phase of engagement emphasized deeper and more focused feedback to inform the draft theme-based goals, strategies and suggested actions.

- Phase 3 – *Draft ESS (proposed for March to May 2016)*

The final and third phase of engagement, the subject of this report, will involve checking in with the community regarding the proposed ESS framework contained within the *Draft ESS Report* to see if the recommendations match the priorities and perspectives identified in earlier phases.

Over 2,100 people have been engaged and over 7,000 ideas have been collected in the first two phases of ESS public consultation, as shown in **Figure 1** (below). The response from the public and stakeholders has been overwhelmingly positive. This input has helped to shape the *Draft ESS Report*.

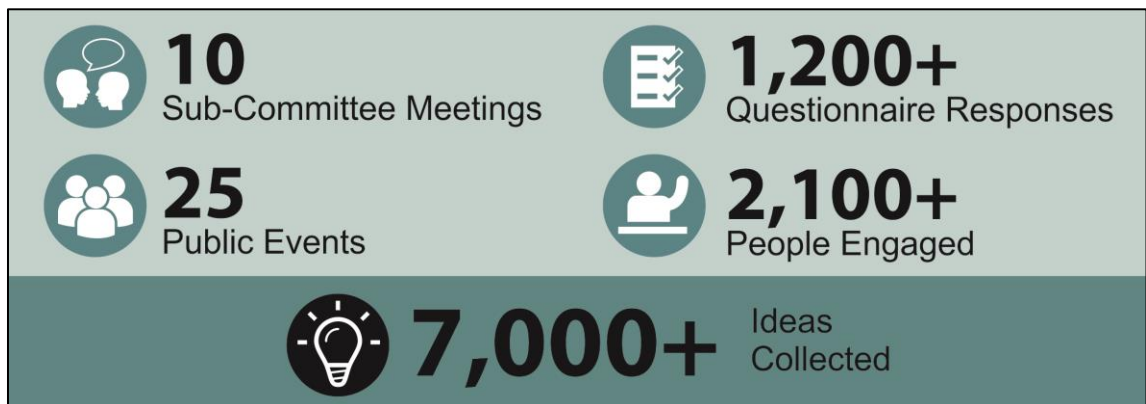


Figure 1: *ESS Public Consultation Results (Phases 1 and 2)*

Extensive and creative community engagement methods were used including a website, information displays and brochures, mobile online questionnaires on iPads, community engagement volunteers, environmental Super-Heroes (Phase 1), a Vision Tree (Phase 1), a public workshop (Phase 2), Sustain-A-Bucks group activity (Phase 2) and a youth video contest (Phase 2). The process has brought together motivated individuals, groups, businesses and institutions to envision and create a plan for Burnaby's green future.

The ESS process and the creation of the *Draft ESS Report* was guided by the 20 member ESS Steering Committee of recognized community leaders from diverse backgrounds and interests, chaired by Mayor Corrigan and served by Councillors Dan Johnston (vice chair), Sav Dhaliwal, Colleen Jordan, and Richard Chang. Citizen members of the ESS Steering Committee included Mark Angelo, Frank Bassett, Paul Cipywnyk, Chris Dikeakos, Diane Gillis, Jack Gin, Linda Huang, Paul Holden, Isabel Kolic, Dick Kouwenhoven, Jennie Moore, Dirk Odenwald, Harman Pandher, Bill Schwartz, and Dave Switzer.

Biographies for the Steering Committee members can be found at:
www.burnaby.ca/ess-sc

2.1.1 Phase 1 Consultation – “Issues and Priorities”

Phase 1 public consultation was held from May to July 2013, focusing on “*Issues and Priorities*” and this initial round of consultation, focused on broad and high-level engagement, was designed to raise awareness about the process and to attract input from diverse audiences and voices.

Seven public events were attended by staff and volunteers and about 500 people were engaged through a variety of methods including an online questionnaire hosted on iPads. Phase 1 public consultation revealed broad interest and support for environmental protection, restoration, and related sustainability initiatives.

Respondents also stated a strong desire for more information, education and involvement, demonstrating a willingness to take an active part in Burnaby's sustainability initiatives.

This feedback was used to refine the draft vision and goals for the ESS.

To view the complete summary of ESS Phase 1 public consultation, please visit www.burnaby.ca/ess-report-B.

2.1.2 Phase 2 Consultation – “Exploring Further”

In advance of engaging the public in Phase 2, four **Sub-Committees** were convened in the Fall of 2013. In total, 11 meetings were held with over 100 people in total, and networking was undertaken by sub-committee members among 550 people in their broader peer groups.

Phase 2 ESS public consultation (“*Exploring Further*”) took place between March and July 2014 and engaged the public in deeper and more focused ways by presenting a draft vision statement, 10 draft ESS goals and 51 draft ESS strategies to the community for feedback.

The public engagement consisted of 10 public events and three presentations attended by staff and volunteers and a variety of methods were used to engage over 1,600 people during Phase 2.

There was generally a **high level of support** for the proposed ESS vision, goals and strategies.

- Draft vision statement was well received (84% support).
- Draft goals and strategies were well received and strongly supported (80%-97% support).
- No major ‘missing pieces’ or missing areas of focus at the goal level were identified.
- No “red flags” were identified.

Almost 3,900 suggestions and comments were received. These **ideas were analyzed in detail** using a key word approach to group similar ideas. This detailed analysis was then used as key input to help develop the proposed ESS framework, “*Big Moves*” and “*Quick Actions*”, as described in Section 3 of this report.

To view the complete summary of ESS Phase 2 public consultation, please visit www.burnaby.ca/ess-report-C.

3.0 THE DRAFT ESS

The Draft ESS Report, distributed to Council under separate cover, is available for viewing at the Planning department, and following Council approval of this report, it will be posted at www.burnaby.ca/ess-input.

3.1 ESS Framework

The draft framework contained within the *Draft ESS* represents the heart of the document. It was created based on the input received during phases 1 and 2. The draft framework is intended to provide clear direction on the areas that are priorities for City action. As shown in **Figure 2** (below), the draft ESS framework has four layers, with each level being supported by more detail in the level below. Moving from the highest level to the most detailed level: there is one vision, 10 goals, 49 strategies and 151 suggested actions.

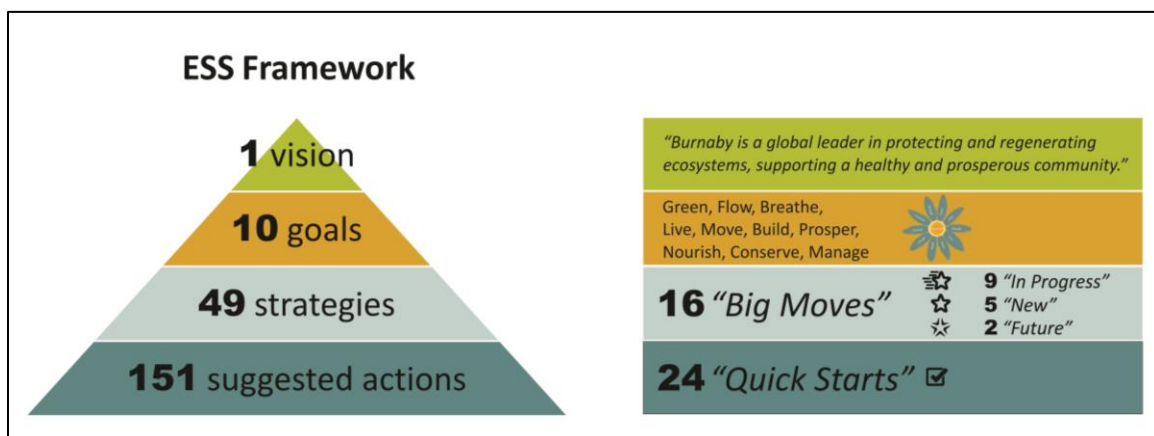


Figure 2: ESS Framework

3.1.1 Vision

The purpose of the vision is to express a common direction for the City's environmental future to help align decisions and actions so that the community can collectively move toward this shared vision. The draft vision for the ESS was developed with significant input from the public and the Steering Committee.

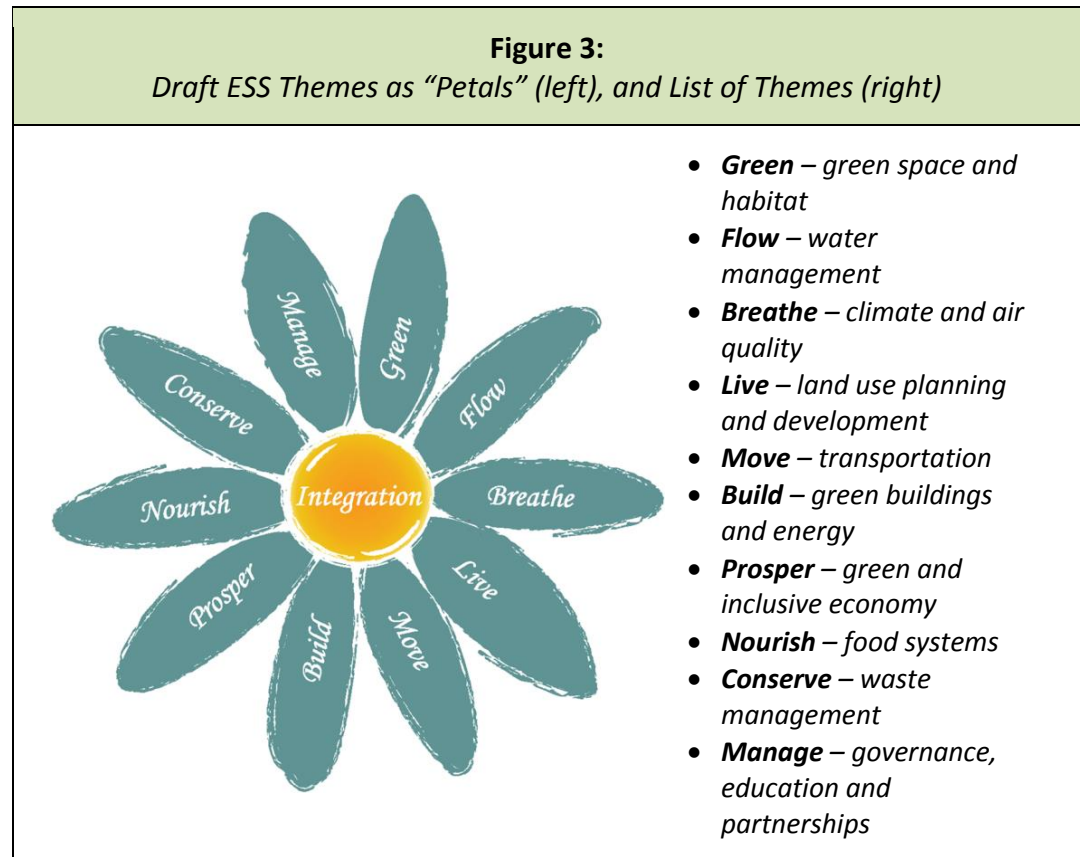
A vision for Burnaby's Future:

"Burnaby is a global leader in protecting and regenerating ecosystems, supporting a healthy and prosperous community."

The Draft ESS Report also contains a longer ‘narrative’ of the vision that is intended to evoke the imagination.

3.1.2 ESS Theme-Based Goals

Burnaby’s *Draft ESS* is structured around **10 themes**, represented as petals of a flower, as shown in **Figure 3** (below), to support the draft vision for the ESS. A goal statement accompanies each theme.



The *Draft ESS Report* includes 10 ‘ESS at-a-glance’ summary pages – one for each goal. **Figure 4** (next page), shows the page layout, including: “Now” (Burnaby today), “Future” (details on the ESS framework – goal, strategies, and suggested actions), and “What Can You Do?” (suggestions on what the public can do to help – based on ideas collected during the Phase 2 public consultation).

3.1.3 Strategies and “Big Moves”

Each of the goals is supported by a number of **strategies**, 49 in all. 16 of the Strategies have been identified as “**Big Moves.**” “Big Moves” represent a significant opportunity, a key strategy necessary to achieve a goal, and/or received strong sub-committee/public support. “Big Moves” may also require

further policy approval by Council and/or additional resources due to the scope of the proposed strategy.

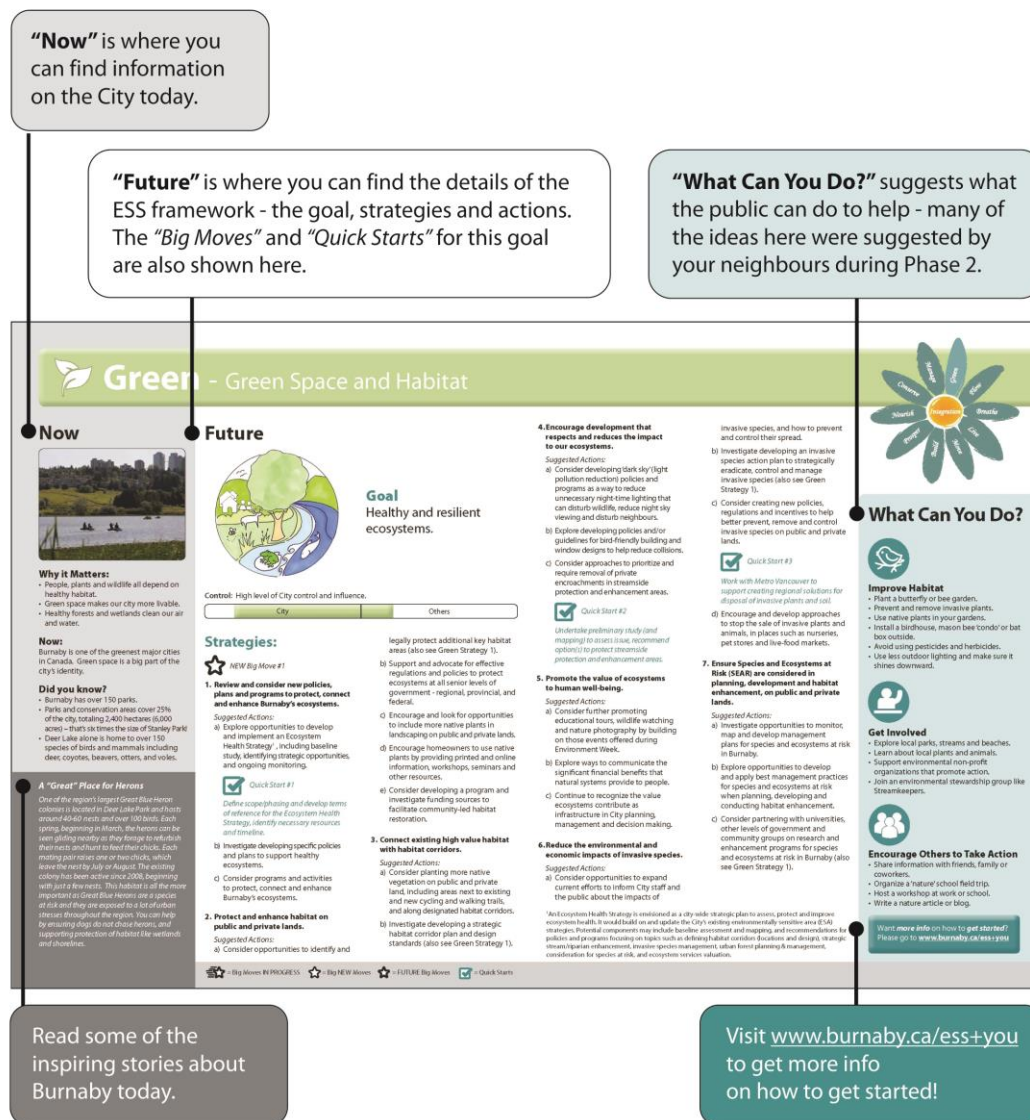


Figure 4: How to read the 'ESS at-a-glance' summary pages.

Three types of "Big Moves" have been identified:

- In Progress (9 strategies)** – "Big Moves" that acknowledge and build on what we are already doing; lend strength and focus to our existing efforts; link to work in progress; and help guide, shape and improve what we are doing now.
- New (5 strategies)** – "Big Moves" that introduce new areas of work (policies, programs, other actions) and highlight these as priorities for Council's

consideration. These would be approved-in-principle by Council with the adoption of the ESS.

- **Future (2 strategies)** – “Big Moves” that acknowledge anticipated future work (likely policy work); and lend strength and focus to future work.

The *Draft ESS Report* includes a summary list of the proposed “Big Moves” (Table 1 of the *Draft ESS Report*, provided under separate cover).

3.1.4 Actions and “Quick Starts”

Each of the strategies is supported by a number of suggested actions, 151 in all. In addition to the 151 suggested actions, there are 24 “Quick Starts”. For every “Big Move” there is a supporting “Quick Start” to get things moving, as shown in **Figure 5** (right). “Quick Starts” are proposed City actions that take advantage of short term opportunities, build momentum and demonstrate commitment to the ESS.

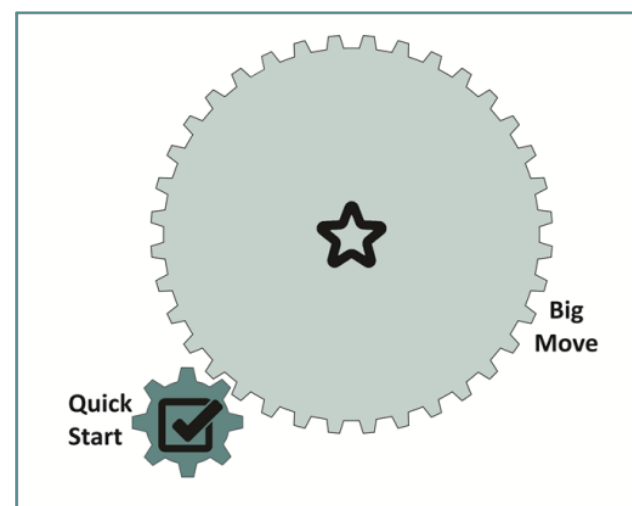


Figure 5: “Quick Starts” and “Big Moves”

The *Draft ESS Report* includes a summary list of the proposed “Quick Starts” (Table 2 of the *Draft ESS Report*, provided under separate cover).

3.1.5 Gap Analysis

The draft ESS framework was compared to other leading city scale sustainability frameworks. The results of this Gap Analysis indicate that the *Draft ESS Report*, supported by the *Community Energy and Emissions Plan* (CEEP) and *Economic and Social* strategies, provides a comprehensive framework covering all key areas.

Additional background information about the ESS can be found at www.burnaby.ca/ess-input.

4.0 THE COMMUNITY ENERGY AND EMISSIONS PLAN (CEEP)

Burnaby has already made great progress in wise energy use and emissions management, like using compact land uses around SkyTrain stations. Burnaby currently has one of the lowest emission rates per person in the province (4.3 tonnes per person), well below the BC average

(5.0 tonnes per person). However, the City also faces several challenges in reducing total community emissions over time, which require careful consideration:

- Significant population growth (120,000 more people by 2041).
- Limited control of several key levers for energy and emissions reductions, such as improving transit service and vehicle efficiency standards.
- Limited local government powers and resources, including legislative, human and financial.

Under the leadership of Burnaby Council, the City took advantage of a unique opportunity to develop a *Community Energy and Emissions Plan* (CEEP) in support of the ESS process. The CEEP process, previously approved by Council at its meeting of 2011 November 7, was designed to create a more detailed plan focused on reducing community greenhouse gas (GHG) emissions and energy use.

Burnaby's Draft CEEP is a plan to reduce the community's overall energy use and greenhouse gas (GHG) emissions, in order to address climate change, improve local air quality, save money, and improve livability and health. The *Draft CEEP* supports many of the goals of the ESS, as well as the *Economic* and *Social* sustainability strategies.

The *Draft CEEP*:

- includes targets for GHG reduction along with goals, strategies and actions;
- focuses on four key sectors: buildings, transportation, district energy and solid waste; and
- also supports many of the ESS goals.

The key points of the *Draft CEEP* are presented in **Attachment 3**, and were circulated to Council under separate cover and are available for viewing in the Planning Department. Following approval of this Council report, the information contained within **Attachment 3** will be posted at www.burnaby.ca/ceep.

4.1 CEEP Process Overview

The CEEP was developed through a combination of public input, technical work, and dialogue.

Public input on a number of CEEP related ESS goals, including Breathe, Live, Build and Move, was collected during ESS Phase 2 ("*Exploring Further*") public consultation.

The **technical work** was based on a rigorous science-based model, calibrated for Burnaby, that estimated today's emissions and the potential impact of different strategies to reduce emissions over time.

Dialogue included meetings with the CEEP Steering Committee (consisting of City staff and representatives from key partner agencies), and workshops with the ESS Steering Committee and community stakeholders.

This approach allowed participants to understand the impacts of various strategies, to provide input into choosing desirable and feasible strategies, and to have confidence that the target chosen will be achievable.

Although the CEEP is being developed through a parallel process to the ESS, its draft recommendations were integrated into the ESS to address climate change and to complement other goals for community health and livability, such as:

- **Health** – as more people walk and cycle instead of driving their health improves, they are happier, the air is cleaner.
- **Reduced costs** – buildings that are better insulated cost less to heat/cool and walking/cycling cost less to travel.
- **Economic growth** – ‘green’ jobs in building trades, green building materials and renewable energy.
- **Livable communities** – walkable, ‘complete’ communities that are attractive, lively and enrich our lives.

4.2 Unique Approach to Targets

Reducing energy use and emissions is a shared responsibility and requires effort from the federal and provincial governments, regional organizations like TransLink, the business community, the City of Burnaby and citizens. The CEEP is a plan for the community (City, residents, businesses, and other agencies) to all take action.

Burnaby’s approach of setting two targets is unique. A “*City Only*” target and a further “*City Plus Others*” target makes it clear how the City can take action and how others can take action.

The “*City Only*” objectives were determined by assessing jurisdiction: who can do what. The City also considered Burnaby’s ability to implement and deliver, resulting in an achievable target with feasible objectives and actions.

The primary “*City Only*” target, in areas the City has control over, is a 5% reduction in 2010 baseline emissions by 2041. This may sound like a ‘small’ target but it means that, by 2041, projected emissions will be reduced by over 20% when compared to the future trend if no action was taken at all. This is a big reduction and is shown on the right side of the top band of the ‘wedge’ in **Figure 6** (next page).

A second target, “*City Plus Others*,” shows how much emissions could be reduced if other agencies also took action alongside the City. The “*City Plus Others*” target shows

that with this cooperation we could reduce community emissions by over 40% in total by 2041 compared to if no action were taken. This second part of the reduction is shown on the right side of the second band of the ‘wedge’ in **Figure 6** (below).

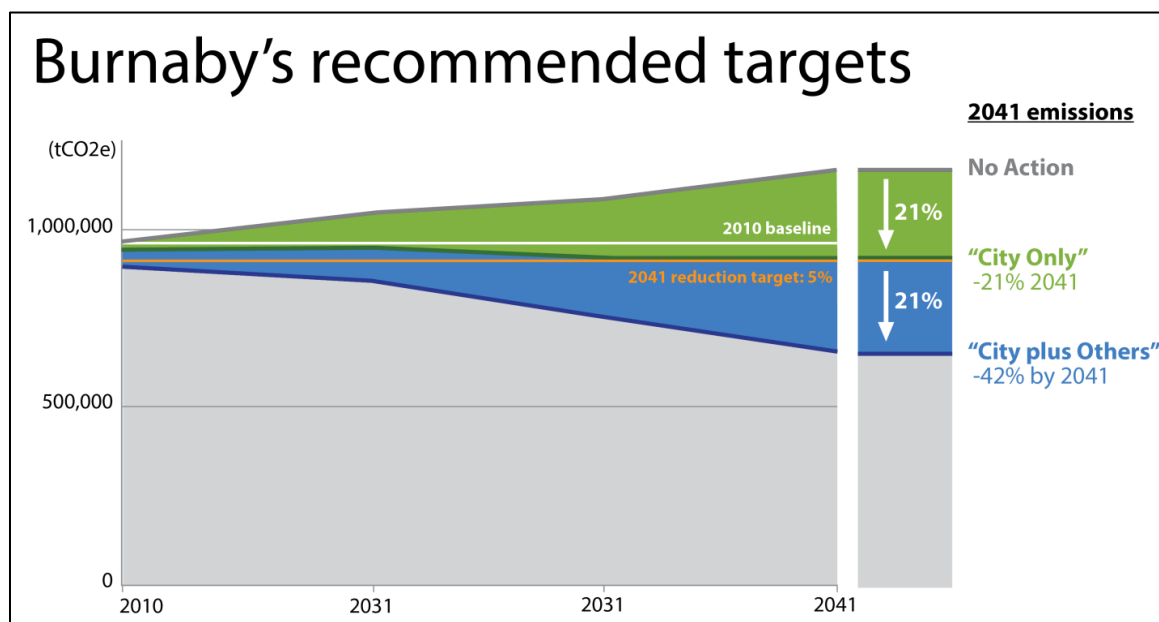


Figure 6: Burnaby's draft recommended targets

Each of these targets would contribute about equally to a projected GHG reduction by the year 2041.

4.3 A Strategic Approach – Six Broad City Themes

The “City Only” target calls for a 5% reduction in GHGs by 2041 (compared to 2010), which amounts to reducing total community emissions by over 20% in 2041. The City has control over these actions. The City's proposed reduction target is based on a strategic approach that includes six broad city themes - two city-wide and four sectors (Buildings, District Energy, Transportation and Solid Waste).

City-Wide

1. Continue to **Demonstrate Leadership** on energy and emissions through city initiatives and civic facilities like the energy efficiency features included in the Tommy Douglas Library.
2. Continue the City's commitment to planning **Complete Communities** and transit-oriented development.

Four Sectors

3. Achieve high energy performance in new **Buildings** and encourage energy upgrades in existing buildings. Buildings represent Burnaby's biggest opportunity to reduce greenhouse gas emissions (51% of the "City Only" target).
4. Continue to pursue **District Energy** in large redevelopments. Using District Energy to heat our buildings could further reduce our building-related greenhouse gas emissions (an additional 3% of the "City Only" target).
5. Support a multi-modal **Transportation** system that encourages walking, cycling and public transit. Over a third of our proposed emission reductions (33% of the "City Only" target) could come from improving our transportation options.
6. Continue to increase **Solid Waste** diversion like recycling, food scraps and yard waste. Although solid waste is something we need to tackle together as a region, there are steps Burnaby can take to reduce our emissions (13% of the "City Only" target).

More specific details on the proposed strategies for each of these sectors are provided in **Attachment 3**.

It is estimated that the total net cost to the community (all of us in total - residents, businesses, the City and others) of the proposed "City Only" target would be a savings of \$1 for every tonne of GHGs we reduce. Cost savings in some areas like more energy efficient buildings and reduced travel would offset costs in other areas like district energy, vehicle electrification, and waste.

5.0 DRAFT ESS PUBLIC CONSULTATION PLAN (PHASE 3)

As described in Section 2.1, over 2,100 people have been engaged and over 7,000 ideas have been collected in the first two phases of ESS public consultation ("*Issues and Priorities*" and "*Exploring Further*"). The response from the public and stakeholders has been overwhelmingly positive.

The proposed public consultation plan for Phase 3 ("*Draft ESS*"), the third and final phase of public consultation, is listed in the left column of **Attachment 4** and described below.

As we are now completing the cycle of ESS public consultation, the engagement approach for Phase 3 ("*Draft ESS*") will be similar in scope to Phase 1 ("*Issues and Opportunities*") – broad high level awareness combined with opportunities for meaningful input.

5.1 Objectives

Objectives for Phase 3 ("*Draft ESS*") are to:

- Celebrate the process to date (extensive consultation, collaborative effort, culmination of 'good work').

- Share the *Draft ESS Report* - framework (vision, goals, strategies and suggested actions) and priorities (“*Big Moves*” and “*Quick Starts*”).
- Confirm that the *Draft ESS Report* is on the right track, or correction, if needed.

5.2 Two Streams – Awareness and Engagement

The public consultation plan for Phase 3 (“*Draft ESS*”) has two streams – awareness and engagement.

To increase **awareness**, methods like newspaper ads, news releases, social networking, website material, in person conversation at public events, and networking are being proposed.

To **engage** people, methods similar to those used successfully in the previous two phases of ESS consultation are proposed, including a combination of:

- “going to the community” engagement activities like staff attending community events with information displays and mobile questionnaires; and
- inviting the community to “come to us” engagement activities like hosting a drop-in public workshop.

Table 1
Potential Phase 3 Public Events

Events	Location	Date(s)	Time
Burnaby Youth Sustainability Network		Thursday, April 7	6-8pm
British Columbia Institute of Technology (BCIT) Open House	3700 Willingdon Avenue	Friday, April 8 Saturday, April 9	10am-3pm
ESS Public Workshop	Alan Emmott Centre 6650 Southoaks Crescent	Wednesday, April 20	7- 10pm
BBOT State of the City Address	Delta Hotel & Conference Centre 4331 Dominion Street	Tuesday, April 26	
Easter Seals BC Woman2Warrior	Swangard Stadium	Sunday, May 15	10am-2pm
Burnaby Board of Trade (BBOT) Green Talks		May	
Simon Fraser University (SFU)	SFU, Burnaby campus	To be confirmed.	
Great Salmon Send-Off	Stoney Creek Community School 2740 Beaverbrook Crescent Burnaby	Saturday, May 14	10am-2pm
City of Burnaby Environment Festival	City Hall 4949 Canada Way	Saturday, May 28	10am-2pm
The European Festival	Swangard Stadium	Sunday, May 29	

The Phase 3 (“*Draft ESS*”) public consultation will target attending about nine public events and two stakeholder workshops over about three months. **Table 1** (previous page) lists potential Phase 3 public events, although some locations, dates and times are still to be determined.

5.3 Outcomes

The anticipated outcomes of Phase 3 (*Draft ESS*) include feedback to gauge the general level of support for the high-level directions (goals and strategies), and suggested improvements to be included in the *Final ESS Report*.

5.4 Next Steps – Beyond Phase 3 Public Consultation

The *Final ESS Report* will be refined based on Phase 3 public consultation input (Step 16 of **Attachment 1**) and advanced for Council adoption. Council adoption of the *Final ESS Report* will allow the City to take action on “*Quick Starts*” and “*Big Moves*” while developing a more detailed implementation plan (Step 18 of **Attachment 1**). The detailed implementation plan would then be advanced to Council for approval.

6.0 DRAFT CEEP PUBLIC CONSULTATION PLAN

Public input on a number of CEEP related ESS goals, including Breathe, Live, Build and Move, was collected during ESS Phase 2 (“*Exploring Further*”) public consultation. Now that draft CEEP targets, goals and strategies for GHG reduction have been developed, it is proposed that they be shared with the broader community in concert with the ESS Phase 3 (“*Draft ESS*”) public consultation. Taking the *Draft CEEP* out to the community at the same time as the *Draft ESS Report* offers an opportunity for the *Draft CEEP* to reach a wider audience.

The proposed public consultation plan for the *Draft CEEP* is listed in the right column of **Attachment 4** and described below.

6.1 Objectives

The objectives for CEEP public consultation are:

- Introduce the CEEP.
- Seek public feedback on the draft objectives (buildings, district energy, transportation and solid waste).
- Confirm that draft approach, targets, and strategies (6) are on the right track, or correction if needed.

6.2 Two Streams – Awareness and Engagement

The public consultation plan for the *Draft CEEP* also has two proposed streams – awareness and engagement.

To increase **awareness**, methods like social networking, website material, in person conversation at public events, and networking are being proposed.

To **engage** people, it is proposed that the *Draft CEEP* material would accompany the ESS material in “going to the community” engagement activities with staff attending community events with information displays and in the CEEP specific mobile questionnaires. It is also proposed that a separate “come to us” engagement event for community stakeholders would be hosted for the CEEP.

Five display panels have been created to help share the City’s proposed approach to community GHG reduction, as shown in **Attachment 3**. These boards would serve as display panels at ESS public events listed in **Table 1** (two pages before). This information would also be hosted on-line and would be used as part of the online “*My CEEP questionnaire*.”

6.3 Outcomes and Next Steps

The feedback will help to inform the *Final CEEP Report* which will be advanced in future for Council approval. Following approval by Council, a CEEP implementation plan would be developed and advanced for Council approval.

7.0 CONCLUSION

The *Draft ESS Report* was created based on the input received from the Steering Committee, sub-committees, stakeholders, the public and staff during the ESS Phase 2 (“*Exploring Further*”) public consultation. The *Draft ESS Report* is intended to provide clear direction to staff and the public about areas that have emerged, through the ESS process, that are priorities for City action.

In this third and final phase of ESS public consultation (“*Draft ESS*”), the extensive consultation with the public and stakeholders, collaborative effort in drafting the ESS, and the culmination of ‘good work’ will be celebrated and serve as a basis for a final ‘check in’ with the community. The proposed Phase 3 consultation plan aims to use many of the successful approaches and techniques of Phases 1 (“*Issues and Priorities*”) and 2 (“*Exploring Further*”) and would take place in spring of 2016.

Public input on a number of CEEP related goals, including Breathe, Live, Build and Move, was collected during ESS Phase 2 (“*Exploring Further*”) public consultation. Now that draft CEEP targets, goals and strategies for GHG reduction have been developed, it is proposed that they be shared with the broader community in concert with the ESS Phase 3 (“*Draft ESS*”) public consultation. Taking the *Draft CEEP* out to the community at the same time as the *Draft ESS Report* offers an opportunity for the CEEP material to reach a wider audience.

This report recommends that: Council authorize staff to undertake the third and final phase of the public consultation program to seek response to the *Draft Burnaby Environmental Sustainability*

To: City Manager
From: Director Planning and Building
Re: Environmental Sustainability Strategy
Draft Report and Phase 3 Public Consultation
2016 Feb 24 Page 16

Strategy (ESS) Report, as outlined in Section 5 of this report; Council authorize staff to undertake public consultation on the *Burnaby Community Energy and Emissions Plan (CEEP)*, as a supporting component of the third and final phase of ESS public consultation, as outlined in Section 6 of this report; and Council send a copy of this report to the Environment Committee, the Planning and Development Committee, the Social Planning Committee, the Transportation Committee, and the Parks, Recreation and Culture Commission for their information.


Lou Pelletier, Director
PLANNING AND BUILDING

DAC/LT:sla
Attachments (4)

cc: Deputy City Managers
Director Finance
Director Engineering
Director Parks, Recreation and Cultural Services
City Solicitor
OIC RCMP
Fire Chief
Chief Librarian
City Clerk

Attachment 1: Steps of the ESS Process

Timeline	Inputs	Step	Outputs	Council Reports
	<ul style="list-style-type: none"> 'Community Dialogue' approach Council input 	1 Set Approach	<ul style="list-style-type: none"> funding approved 'Community Dialogue' approach approved 	← Council Report 1
	<ul style="list-style-type: none"> work plan details resources required Steering Committee terms of reference (TOR) 	2 Confirm Process	<ul style="list-style-type: none"> project team assembled process updated Steering Committee TOR approved 	← Council Report 2
	<ul style="list-style-type: none"> consultant terms of reference consultant proposals 	3 Hire Consultant	<ul style="list-style-type: none"> consultant retained work plan confirmed 	
	<ul style="list-style-type: none"> potential Steering Committee members invitations from Mayor 	4 Assemble Steering Committee	<ul style="list-style-type: none"> <u>Draft Environmental Context Report (what we are doing)</u> Steering Committee assembled and approved 	← Council Report 3
	<ul style="list-style-type: none"> <u>Discussion Paper No. 1a: Burnaby's Environmental Achievements</u> <u>Discussion Paper No. 1b: What is Sustainability</u> <ul style="list-style-type: none"> Burnaby's environmental policies best practices by others key challenges / opportunities 	5 Take Stock	<ul style="list-style-type: none"> <u>opportunities and challenges</u> Steering Committee meeting No. 1 (orientation) 	
	<ul style="list-style-type: none"> <u>Draft Environmental Context Report</u> (what we are doing) <u>Cases Studies</u> (what others are doing) <u>Discussion Paper No. 2: Guiding Principles</u> 	6 Set Guiding Principles & Draft Subject Areas	<ul style="list-style-type: none"> Steering Committee meeting No. 2 <ul style="list-style-type: none"> <u>draft guiding principles</u> <u>draft subject areas</u> public consultation strategies suggestions for sub-committee members 	
	<ul style="list-style-type: none"> <u>research tools and logistics</u> draft consultation plan (phase 1) 	7 Draft Community Consultation Plan	<ul style="list-style-type: none"> approved consultation plan (phase 1) 	• Council Report 4
	<ul style="list-style-type: none"> public process kick-off event info on existing policies, programs and initiatives draft guiding principles draft subject areas 	8 Outreach Phase 1	<ul style="list-style-type: none"> <u>Summary Report</u> <ul style="list-style-type: none"> successes acknowledged comments on guiding principles areas for more work emerging issues draft subject areas 	
	<ul style="list-style-type: none"> public input (Phase 1) <u>Discussion Paper No. 3: Vision</u> Keynote speaker at ESS SC Mtg No. 3 <u>Discussion Paper No. 4: Phase 1 Public Consultation</u> 	9 Confirm the Subject Areas	<ul style="list-style-type: none"> Steering Committee meeting No. 3 (draft vision) draft vision statement Steering Committee meeting No. 4 (CEEP) <ul style="list-style-type: none"> confirmed subject areas integration with CEEP comments on draft vision statement 	
	<ul style="list-style-type: none"> <u>Sub-committee terms of reference</u> subject area workshops engage experts ongoing public engagement & awareness ESS draft consultation plan (phase 2) CEEP vision/goals/principles workshop 	10 Sub-Committee Workshops	<ul style="list-style-type: none"> Steering Committee Meeting No. 5 (key directions) <ul style="list-style-type: none"> workshop feedback (interim update) CEEP update draft Strategic Directions 	
	<ul style="list-style-type: none"> Comments from sub-committees and Interagency round-table draft ESS matrix <u>draft Strategic Directions</u> 	11 Draft Community Consultation Plan (Phase 2)	<ul style="list-style-type: none"> Steering Committee Meeting No. 6 (display panels) <ul style="list-style-type: none"> sub-committee summaries draft consultation plan (Phase 2) draft vision statement for public outreach 	• Council Report 5
	<ul style="list-style-type: none"> <u>Public Outreach (questionnaire)</u> <ul style="list-style-type: none"> Vision Theme-based comments (directions, issues, opportunities) promotion at events Staff consultation (workshops) 	12 Outreach Phase 2	<ul style="list-style-type: none"> public feedback staff feedback 	
	<ul style="list-style-type: none"> public input staff input sub-committee input 	Develop Framework	<ul style="list-style-type: none"> <u>Public Consultation Summary Report</u> <u>ESS report outline</u> gap analysis 	• Council Report 6
	<ul style="list-style-type: none"> <u>Case studies</u> <u>Gap analysis</u> <u>Consultation Summary</u> 	14 Draft the Environmental Sustainability Strategy (ESS)	<ul style="list-style-type: none"> Steering Committee meeting No. 7 (framework) <ul style="list-style-type: none"> <u>approved consultation plan (phase 3)</u> <u>Draft ESS Report</u> 	• Council Report 7
Mar – May 2016	<ul style="list-style-type: none"> public open house event online 'open house' 	15 Outreach Phase 3	<ul style="list-style-type: none"> <u>Summary Report</u> <ul style="list-style-type: none"> public response to ESS additional recommendations and suggestions 	
Summer 2016	<ul style="list-style-type: none"> public input (Phase 3) <u>final ESS</u> 	16 Finalize Environmental Sustainability Strategy	<ul style="list-style-type: none"> Council approval of <u>final ESS</u> 	• Council Report 8
Fall 2016	<ul style="list-style-type: none"> report publication and distribution 	17 Project Completion	<ul style="list-style-type: none"> public announcement(s) Steering Committee meeting No. 8 (celebration) 	
2016 onward	<ul style="list-style-type: none"> take action 	18 Implement and Monitor	<ul style="list-style-type: none"> monitor outcomes 	

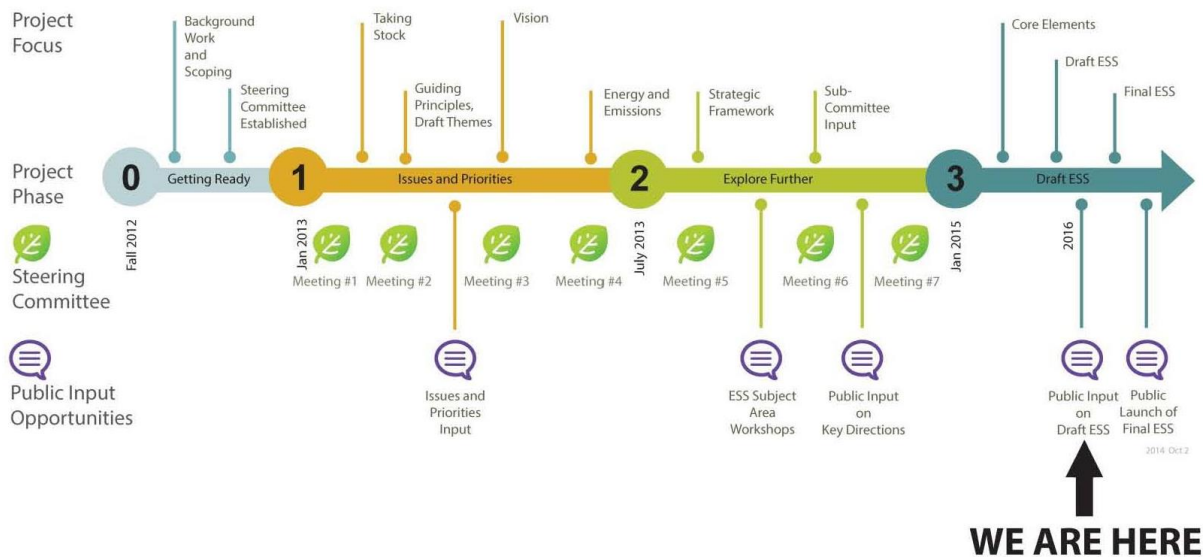
Version: 2016 February 12

Legend: White boxes note steps led by City staff; Grey boxes note steps led by the consultant; and underlined items are key project deliverables.

Attachment 2: Three Phases of the ESS Process



Burnaby Environmental Sustainability Strategy (ESS) Timeline



Phase 1 – Issues and Priorities Jan. to July 2013

Broad, high-level

Issues, opportunities, vision

- Steering Committee convened: focus on guiding principles, draft theme areas.
- Phase 1 Public Consultation: online questionnaire (~**400** responses), display boards, attendance at seven public events, Environmental Superheroes, Vision Tree, and Community Green Map.

Outcomes:

- Draft vision statement; confirmed scope (theme areas) and draft goals.

Phase 2 – Exploring Further July 2013 to Jan. 2015

Deeper, more focused

Goals, strategies, actions

- Sub-Committees (**4**) convened: focus on draft goals, strategies. **10** meetings held with over **100** people in total; networking by Sub-Committee members engaged another **550** people.
- Inter-Agency Roundtable, with representatives from neighbouring municipalities and other levels of government and other organizations.
- Phase 2 Public Consultation: online questionnaire (~**800** responses), display boards, attendance at 15 public events, three invited presentations, public workshop, Community Green Map, youth video contest, and **150** others engaged via workshops and invited presentations using “Sustain-A-Bucks”.

Outcomes:

- Feedback on draft vision, goals, strategies; suggestions for actions - by the City and by individuals; analysis of responses.

Phase 3 – Draft ESS Jan. 2015 to Jun. 2016

Broad, high-level

Framework, priorities

- Preparation of draft ESS framework (vision, goals, strategies, suggested actions) and Draft ESS Report.
- Phase 3 Public consultation: online questionnaire, display boards, stakeholder workshops, and attendance at public events.

Anticipated outcomes:

- Confirmation of level of support for Draft ESS; suggestions on how to improve the Final ESS.

Mayor's Message



Why is the CEEP important?

"In the context of a changing climate - not just the atmosphere but also the social and economic climate - we need to take pragmatic steps to improve the resilience of our City (and) to regenerate the health of our environment and community.

In the CEEP, we will look closely at specific opportunities to improve air quality, make our buildings more efficient, shift to more sustainable transportation, and look for clean and affordable sources of energy - while also reducing emissions. In this way, our emissions target will be built on a sound foundation - not just a number that sounds good. By placing the CEEP within the Environmental Sustainability Strategy, we'll also make sure the broader environmental, social and economic considerations are taken into account."

-- Mayor Corrigan on the purpose of the Community Energy and Emissions Plan

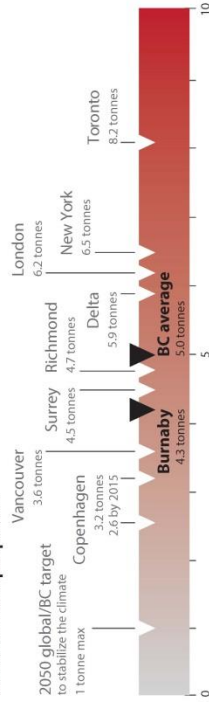
Attachment 3: CEEP Display Panels

Burnaby Today

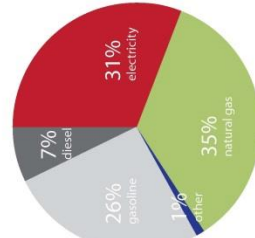
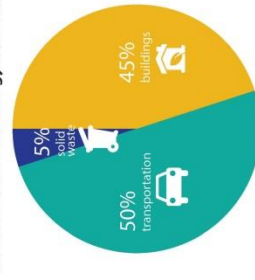
Climate change is one of the most pressing challenges currently faced by society. Burning fossil fuels, including for heating our homes and businesses and powering our cars and trucks, is one of the main sources of greenhouse gas (GHG) emissions, a key driver of climate change. Burnaby's Community Energy and Emissions Plan (CEEP) will help to reduce our community's GHG emissions and meet other goals like improving local air quality, saving money, and improving health and community livability.

Current Conditions

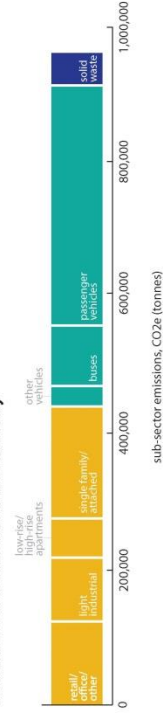
GHG emissions per person



2010 emissions and energy use in Burnaby



Breakdown of GHG emissions in Burnaby



On a per person basis, Burnaby compares well to other cities for GHG emissions. In 2010, total community GHG emissions were 4.3 tonnes per Burnaby resident.

Low carbon BC Hydro electricity, compact land use and a high rate of transit use (23% of daily trips compared to a regional average of 14%) have contributed to Burnaby's relatively low per person GHG emissions.

In 2010, City of Burnaby residents and businesses used over 21 million gigajoules (GJ) of energy and produced over 950,000 tonnes of greenhouse gases.

For the same year, **Burnaby residents and businesses spent over \$300 million on energy.** Saving energy will help us all save money and reduce emissions.

What are the biggest sources of GHGs?

The largest sectors are transportation (50%), buildings (45%), and solid waste (5%). Passenger vehicles are the largest single source at 37% of the City's emissions. Single-family and attached homes are second at 17% of the City's total emissions, and make up just over 50% of Burnaby's residential units. Low-rise and high-rise apartments account for only 6% of total emissions, and make up just under 50% of residential units.

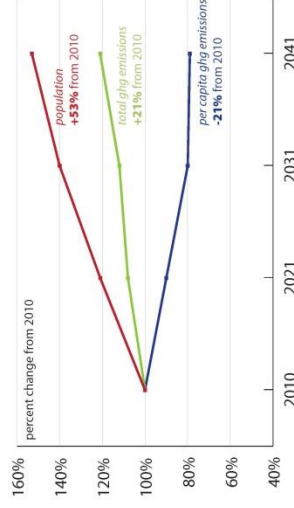


The Challenge Ahead

Burnaby has made great progress in wise energy use and emissions management, particularly with compact land use planning around SkyTrain stations. However, the City also faces several challenges in reducing total community emissions over time, which require careful consideration:

- Significant population growth (120,000 more people by 2041).
- Limited control of several key levers for energy and emissions reductions, such as improving transit service and vehicle efficiency standards.
- Limited local government resources, both human and financial.

Reducing total community emissions, even as Burnaby's population grows.



Burnaby's challenge is to reduce community emissions, even as our population grows (over 50% by 2041 as shown by the **red line** at the top). Even with each person forecast to produce fewer emissions in the future (a reduction of more than 20% by 2041 as shown by the **blue line** at the bottom), the City's total emissions are estimated to increase (by over 20% by 2041 as shown by the **green line** in the middle).

Why does it matter?

- Climate change is one of the most pressing global issues of our time.
- We are already experiencing the effects of climate change, from more wildfires to intense storms to summer droughts.
- We can do many things locally to help.

Additional benefits

- Reducing air pollution can improve air quality and also help to make us healthier.
- Improving transportation choices can help everyone get around Burnaby safely.
- Reducing energy use helps Burnaby businesses and residents save money.

Meeting the Challenge

The City of Burnaby has developed the CEEP to reduce energy use and greenhouse gas (GHG) emissions in the community. Reducing energy use and emissions is a shared responsibility and requires effort from the federal and provincial governments, regional organizations like TransLink, the business community, the City of Burnaby and citizens. The City of Burnaby has proposed a 5% reduction target based on six broad City strategies.

Strategic Approach - Six Broad City Themes

The six themes shown here will enable Burnaby to meet its 5% reduction target. The high level strategic approach is to:

Two City Wide Themes

1. Continue to **demonstrate leadership** on energy and emissions through city initiatives and civic facilities like the energy efficiency features included in the Tommy Douglas Library.

2. Continue planning **complete communities** and transit-oriented development.

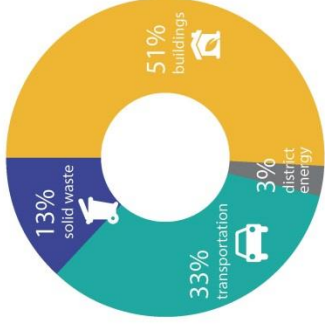
Four Sectors

3. Achieve high energy performance in new **buildings** and encourage energy upgrades in existing buildings.

4. Continue to pursue **district energy** in large redevelopments.

5. Support a multi-modal **transportation** system that encourages walking, cycling and public transit.

6. Continue to increase **solid waste** diversion like recycling, food scraps and yard waste.



Percent of total emission reductions from buildings, district energy, transportation and solid waste to meet the City's 5% target.

Leadership and compact land use support these reductions. The proportion of reductions from transportation would increase if other levels of government did their part.

Demonstrating Leadership in Burnaby

Burnaby will continue to use energy responsibly in City operations; provide resources to support CEEP strategies; develop partnerships with others to advance action on community energy; and advocate for other levels of government to take action to reduce energy use and emissions. The City's current achievements include:

- Supporting development of high-performance buildings like Harmony House and communities like UniverCity; development of walking and cycling routes in the City, like completion of the Central Valley Greenway.
- Alternative energy in private and public buildings, including geothermal in Tommy Douglas Library, Burnaby Mountain and Burnaby Central Secondary Schools, UniverCity Cornerstone building, and Solo development (under construction), and solar thermal water heating for Bonsor pool.



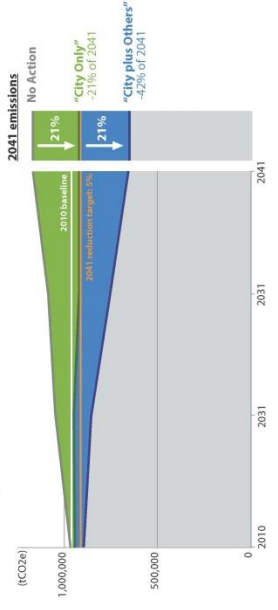
What do the CEEP Targets mean?

The primary **"City Only"** target that Burnaby is committing to, in areas the City has control over, is a **5%** reduction in emissions by 2041 compared to 2010. This may sound like a "small" target but it means that, by 2041, projected emissions will be reduced by **over 20%**. This is a big reduction, as shown in the green band on the right hand side of the 'wedge' graph below.

A second target, **"City Plus Others"**, shows how much emissions could be reduced if other agencies also took action alongside the City. The City Plus Others target shows that with this cooperation we could reduce community emissions by **over 40%** in total.

Each of these targets would contribute about equally to a projected GHG reduction by the year 2041, as shown in the 'wedge' graph below.

Burnaby's recommended targets

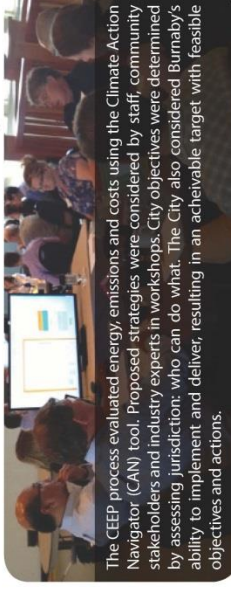


Estimated per capita emissions (tonnes per person)



Emissions can also be calculated per-person (per year). Today's **per-person emissions** of 4.3 tonnes could be reduced to 2.6 tonnes with "City Only" actions, or to 2.0 tonnes with "City Plus Others" actions. The BC target is 1.0 tonne per person by 2050.

How was the recommended target set?



The CEEP process evaluated energy, emissions and costs using the Climate Action Navigator (CAN) tool. Proposed strategies were considered by staff, community stakeholders and industry experts in workshops. City objectives were determined by assessing jurisdiction: who can do what. The City also considered Burnaby's ability to implement and deliver, resulting in an achievable target with feasible objectives and actions.

Buildings & District Energy



Order of priority (highest to lowest)



Burnaby's CEEP Building Strategies



1. Use policies to encourage:
 - energy efficient building types and locations; and
 - density and mixed use in town centres and areas well served by transit.
2. Meet updated building code requirements for new building energy performance.
3. Encourage new building design and construction to be more energy efficient than required in the BC Building Code, including using passive design, improved building envelope design and efficient heating and cooling systems.
4. Develop programs and incentives to encourage residents, businesses and building owners to improve energy efficiency when renovating buildings.
5. Develop policies and programs to measure and communicate how much energy a building uses (for example using energy audits and EnerGuide labels or building benchmarking).
6. Encourage more re-use and recycling of building materials when a building is being torn down.
7. Encourage using renewable energy in buildings, like solar power/heat, geothermal heat (ground heat), and re-using waste heat from nearby sources.

51%



Burnaby's CEEP District Energy Strategies



1. Continue to investigate District Energy opportunities in large new developments.
2. Encourage using waste heat from sources like industrial sites and sewers.
3. Encourage low-carbon fuel sources for existing or new District Energy systems.
4. Consider requiring or encouraging heating/cooling systems in new developments that allow for future connection to a District Energy system.

Actions by Others

Federal and provincial governments; TransLink; BC Hydro and Fortis; financial institutions

- Improve energy performance in the National Energy Code and BC Building Code
- Develop an energy efficiency "Reach Code"
- Provide rebates for home energy upgrades
- Require home energy EnerGuide labels when houses are sold
- Provide incentives for EnergyStar new homes
- Improve heating, hot water and appliance efficiency standards/regulations
- Provide utility programs to help commercial customers reduce energy use
- Enable national benchmarking programs (e.g. Portfolio Manager)
- Provide financing for energy efficient construction and upgrades

Ideas in Action



Metrotower III, a 29-storey, 400,000 sf office tower completed in 2014, features energy efficiency, reuse of stormwater, and exceptional indoor air quality. The project is pre-certified LEED™ Platinum, allowing tenants to achieve LEED™ Commercial Interior certification, in support of greening their businesses.



The University Childcare Centre, which opened in 2012, was designed according to the International Living Building Institute's *Living Building Challenge*™, currently the highest standard for green building design. Performance components include net zero energy, meaning the building generates as much energy as it uses. The centre's construction budget was equivalent to a standard building.

Transportation & Solid Waste



Order of priority (highest to lowest)



Burnaby's CEEP Transportation Strategies



1. Develop a Transportation Plan that emphasizes citizens' ability to move comfortably around Burnaby at any age as a pedestrian, cyclist, transit user or mobility scooter user.
2. Continue to develop and improve Burnaby's comprehensive pedestrian connections and cycling network.
3. Partner with school board, community groups, businesses, business associations and the police to foster and support a culture of walking and cycling throughout all parts of the city.
4. Improve the transit experience in Burnaby, like more bus stops and more shelters and bus priority measures. **33%**
5. Encourage electric vehicles by:
 - Developing policies and programs that encourage electric vehicle use.
 - Requiring or encouraging electric vehicle charging stations in new developments.
 - Exploring partnerships to install publicly accessible electric vehicle charging stations.
6. Encourage and develop partnerships to expand car-sharing opportunities.
7. Encourage local businesses to provide programs and incentives for sustainable transportation like discounted transit fares and showers and lockers for cyclists.
8. Develop a comprehensive, city-wide plan for parking that explores the use of a range of options like adding parking meters, reducing parking, and introducing parking permits.



Burnaby's CEEP Solid Waste Strategies



1. Continue to demonstrate leadership at City Hall with expanded recycling, and through partnerships in the community, like extending food scraps programs with community partners.
2. Continue taking municipal actions in Metro Vancouver's Integrated Solid Waste Management Plan to reach a regional diversion rate of 80% by 2020. For example, expand the food scraps and yard waste collection program to apartment buildings and look for opportunities to divert waste from construction sites.



Actions by Others

Federal, provincial and regional governments; TransLink; BC Hydro

Transportation demand management

- Develop a regional parking strategy
- Adopt a regional road pricing strategy
- Bring in distance-based insurance

Transit improvements

- Ensure stable and increasing public transportation funding
- Upgrade to a Frequent Bus Network or Bus Rapid Transit

Improve the regional cycling network and infrastructure

Vehicle efficiency and fuel switching

- Improve vehicle fuel efficiency standards
- Continue the electric vehicle incentive programs
- Install fast-charge electric vehicle charging infrastructure
- Improve low-carbon fuel standards

Ideas in Action



Land allocated to roads makes up 20% of the City of Burnaby. In January 2015, Burnaby City Council approved "public realm design standards" for streets in the four Town Centres. The goal is to design attractive and functional streets for all modes (e.g. walking, cycling, transit, and driving), ages, and abilities. Streets should become "places for people" and enhance community feeling. Some street segments have already been built, as part new developments.

Shri Guru Ravidass Sabha Community Centre has 500 to 1000 people in attendance weekly. Food plays a vital role, bringing people together. Through sharing food, the community realised they wanted to look for a more sustainable solution to garbage and food waste. They approached the City to ask about joining the City's Food Scraps Program: after an assessment by the City, a food scraps project was launched at the Centre. With up to 500 lbs diverted to organics collection every week, the Centre has now moved to bi-weekly garbage collection.

Attachment 4: Phase 3 Public Consultation Plan

	Draft ESS Phase 3	Draft CEEP
	The third phase of engagement will be the final check-in with the community to make sure there is broad support for the Draft ESS Report – the framework and priorities.	The first time the approach for the CEEP will be shared with the public - draft targets, strategies (6), and objectives (buildings, DE, transportation and solid waste).
Engagement Focus	Broad, high-level awareness Framework, priorities	Deeper, focused Approach, targets, strategies and objectives
Objectives	<ul style="list-style-type: none"> Celebrate the process to date (extensive consultation, collaborative effort, culmination of ‘good work’). Share the Draft ESS Report - framework (vision, goals, strategies and suggested actions) and priorities (“<i>Big Moves</i>” and “<i>Quick Starts</i>”). Confirm that the Draft report is on the right track, or correction, if needed. 	<ul style="list-style-type: none"> Introduce the CEEP. Seek public feedback on the draft objectives (buildings, district energy, transportation and solid waste). Confirm that draft approach, targets, and strategies (6) are on the right track, or correction if needed
Potential Techniques AWARENESS	Newspaper ads News releases (<i>earned media</i>) Website Social Media In person (~9 public events*) Networking	Website Social Media In person (~9 public events*) Networking
Potential Techniques ENGAGEMENT	Online questionnaires Display boards (ESS ~14) Stakeholder workshops (2) <ul style="list-style-type: none"> Sub-com/CEV public Public events (~10*)	Online questionnaires Display boards (CEEP ~5) Stakeholder workshops (tbd) <ul style="list-style-type: none"> community stakeholders secondary school(s) SFU/BCIT BBOT Public events (*ESS events)
Anticipated Outcomes	A summary of the level of public support for the Draft ESS and additional recommendations and suggestions to incorporate into the final ESS.	A summary of the level of public support for the draft approach for the CEEP and additional recommendations and suggestions to incorporate into the Draft CEEP Community Report.