Kelowna Climate Action Workshop

City of Kelowna

Background

In September, 2007 the City of Kelowna signed the provincial BC Climate Action Charter (CAC), voluntarily committing to undertake actions to reduce both community and corporate greenhouse gas (GHG) emissions.

In 2008, the Province instituted Bill 27, Local Government (Green Communities) statutes amendment act which required all communities to set a greenhouse gas reduction target and adopt policies supportive of achieving the target. The City emulated the Provincial target and adopted the following policy into the Official Community Plan:

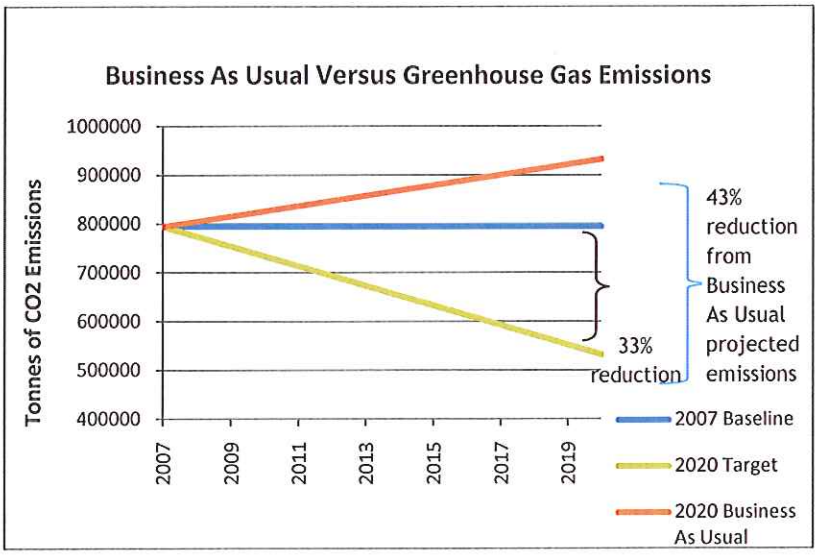
> *OCP Policy 6.2.1 - GHG Reduction Target and Actions. The City of Kelowna will, in partnership with: senior governments; local residents and businesses; NGOs; external agencies; and utility providers, work towards reducing community greenhouse gas emissions by 33% (from 2007 levels) by 2020.*

In 2010, the City successfully applied and received $90,750 from FCM's Green Municipal Fund for the development of both a Corporate and a Community Climate Action Plan. The deadline to submit both Council endorsed plans is June, 2012.

Kelowna Greenhouse Gas Emissions

The Province has provided Community Energy and Emissions Inventories (CEEI) for all municipalities and regional districts in BC. According to the 2007 inventory, 794,539 tonnes of greenhouse gases were emitted in Kelowna. Motor vehicles account for most (over 65%) of Kelowna's community greenhouse gas emissions. Energy use in buildings accounted for 28% and emissions from solid waste contributed 7%.

It is estimated that, by 2020, emissions will increase by 17%, reaching over 932,000 tonnes if the community continues business as usual (i.e. no lifestyle change). The community will have to reduce emissions by over 400,000 tonnes in order to reach our 33% reduction goal.



The Community Climate Action Plan

On November 30, 2009, Council directed staff to "proceed to prepare an Action Plan to reduce community greenhouse gas emissions."

Public consultation conducted by the City has shown that the community is asking for a future where Kelowna is compact and walk-able; the natural environment is protected and preserved; and walking paths and bicycle routes connect to key destinations.[1] This is a future that will also achieve a 33% emission reduction.

A consultant was retained to identify reduction initiatives to reach the 33% target. The proposed initiatives underwent consultation with stakeholders, businesses, the public and City staff to gauge feasibility. Consultation results were then used to draft Kelowna's Community Climate Action Plan.

[1] Kelowna 2030 Official Community Plan, 2011. Page 1-1/

The Plan outlines how the City, senior government, utilities, businesses and residents can work together to achieve a 33 percent reduction in community greenhouse gases by 2020. While infrastructure, policies and incentives are key components, the success of the plan will be dependent on the community shifting behavior and embracing new opportunities.

Transportation provides the biggest opportunity for emissions reduction. Of the variety of initiatives to reduce these emissions the most effective is getting people to drive 20% less. The City can help by shifting its focus from moving vehicles to moving people (on buses and with active transportation).

Improving energy efficiencies in both new and existing buildings (such as updating the BC Building Code or implementing district energy) will help lower emissions from that sector.

Implementing the Regional Solid Waste Management Plan will result in significant reductions in the waste sector.

Finally, land use planning and urban design can influence reductions in greenhouse gas emissions through creating a compact, walk-able community.

Emission Reduction Opportunities

Category	Reduction (tonnes)	% of Total
The Way We Get Around (Transportation)	216,651	54.1%
The Energy We Use (Buildings)	47,964	12.0%
Planning Our Community	31,450	7.9%
The Waste We Create	49,022	12.2%
Senior Government and/or new technology	55,082	13.8%
TOTAL	400,169	100%

All the reductions are required and will get Kelowna 86% of the way to the 33% target. Innovative technology and further rigorous senior government initiatives will be required to bridge the final gap. This approach is not unlike that reflected in the Provincial Climate Action Plan, which identifies strategies to achieve 73% of the 33% reduction provincial reduction target.[2]

The actions outlined in the Plan will reduce emissions while creating a stronger, healthier, more resilient community.

The Corporate Energy and GHG Emissions Reduction Plan

Corporate greenhouse gas emissions make up 1% (8017 tonnes) of Kelowna's community emissions.

Council received the Corporate Energy and GHG Emissions Reduction Plan in December, 2010 which outlined corporate emissions as well as opportunities for a 22% absolute reduction in corporate GHG emissions by 2017.

Rather than meet the original Climate Action Charter requirement of becoming carbon neutral by 2012, the Province has allowed communities instead to "make progress towards" carbon neutrality. The City has taken this approach, establishing a Carbon Energy Reserve Fund. Funded by the provincial Climate Action Revenue Incentive Program, it will fund corporate GHG reduction projects.

Recently awarded General Strategic Priorities funding will also contribute to corporate emissions reduction projects at the Airport and Waste Water Treatment Facility.

Next Steps

The public will have the opportunity to review the draft Community Climate Action Plan in March, and the final plan will be presented to Council in April.

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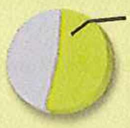
[2] Province of BC, 2008. **Climate Action Plan**. www.livesmartbc.ca/attachments/climateaction_plan_web.pdf

SUMMARY OF REDUCTION INITIATIVES TO MEET A 33% REDUCTION IN COMMUNITY GREENHOUSE GASES BY 2020

The Way We Get Around
(Transportation)



54.1% of Total Kelowna GHG Reductions

= 216,651 tonnes

Action	Partners[1]	Target	Reduction (tonnes)[2]	% of reduction
1. Reduce vehicle kilometers travelled by 20% per capita	LG, SG, B, R	Use a combination of initiatives such as transit, walking, cycling, carpooling to reduce vehicle kilometers travelled by 20% per capita.	134,490	33.6%
2. Right sizing vehicles	LG, SG, B, R	Promote consumer purchases to achieve a target of 15% fewer trucks, 7.5% fewer large cars (to be replaced with an equivalent amount of small passenger cars).	54,702	13.7%
3. Implement stricter tailpipe emission standards	SG	Implement stricter emissions controls on passenger vehicles after 2016, with potential annual improvements of 6% for 2017 model vehicles and later.	8,787	2.2%
4. Increase replacement rate of older vehicles	LG, SG, B, R	Promote the replacement of older vehicles to achieve a 10% increase in greenhouse gas emission standards compliant vehicles by 2020.	8,540	2.1%
5. Improve vehicle maintenance and change driving habits to improve fuel efficiency	LG, SG, B, R	Encourage the public to undertake regular vehicle maintenance, maintain proper tire pressure and to not drive aggressively.	5,066	1.3%
6. Reduce idling	LG, SG, B, R	Promote programs to reduce idling and develop an anti-idling bylaw.	5,066	1.3%

The Energy We Use
(Buildings)

12.0% of Total Kelowna GHG Reductions

= 47,964 tonnes

Action	Partners[1]	Target	Reduction (tonnes)[2]	% of reduction
1. Improve energy efficiency in new buildings	LG, SG, U, B, R	Achieve an EnerGuide rating of 80 for 100% of new, detached and single-unit row houses. Achieve the energy performance outlined in the new federal Model National Energy Code for 100% of new multi-unit residential, commercial, institutional and industrial buildings.	16,846	4.2%
2. Install district energy	LG, SG, U	Implement district energy for City Centre and South Pandosy.	16,300	4.1%
3. Utilize bio-methane for residential heating	LG, U, R	Develop a facility at the Glenmore Landfill to recover landfill gas and upgrade it to pipeline-grade methane for heating residential homes. The reduction is based on 1600 homes using landfill gas bio-methane by 2020.	7,171	1.8%
4. Improve energy efficiency in existing buildings	LG, SG, U, B, R	Reduce natural gas and electrical energy consumption in existing buildings by 3% below 2007 levels.	6,635	1.6%
5. Increase building efficiencies through compact development	LG, B, R	Achieve an annual incremental increase in compact development such that the proposed densification targets for new residential buildings will be consistent with the 2030 Official Community Plan.	1,012	0.3%

Planning Our Community

7.9% of Total Kelowna GHG Reductions

= 31,450 tonnes

Action	Partners[1]	Target	Reduction (tonnes)[2]	% of reduction
1. Maintain and improve urban forest	LG, SG, R, B	Maintain existing urban forest; and City Parks to plant 25,600 trees by 2020 (a combination of seedlings and 2-3" caliper trees).	23,694	5.9%
2. Achieve municipal carbon neutral governance	LG, SG	Implement Corporate Energy and GHG Emissions Plan and purchase offsets to become carbon neutral.	7,756	1.9%
3. Develop municipal policies and programs to achieve a low carbon community	LG	Implement policies outlined in the Kelowna 2030 Official Community Plan that are consistent with reducing greenhouse gas emissions and investigate the implementation of a development permit area for energy conservation.	N/A	N/A

The Waste We Create

12.2% of Total Kelowna GHG Reductions

= 49,022 tonnes

Action	Partners[1]	Target	Reduction (tonnes)[2]	% of reduction
1. Implement Regional Solid Waste Management Plan	LG, SG, B, R	Design and implement programs within the framework of the Central Okanagan Solid Waste Management Plan with the goal of exceeding diversion targets of 58% to 66% by 2023; and capture 50% of landfill gas with 70% efficiency.	49,022	12.2%

Senior Government and/or New Technology

13.8% of Total Kelowna GHG Reductions

= 55,082 tonnes

Action	Partners[1]	Target	Reduction (tonnes)[2]	% of reduction
1. Senior Government and/or New Technology	SG	The remainder reduction to reach 400,169 tonnes is to be achieved through new senior government programs and/or legislation in combination with new technological advances.	55,082	13.8%

[1] LG = Local Government
SG = Senior Government
U = Utility Companies
B = Businesses
R = Residents

[2] Reduction initiatives and quantities are provided by Hyla Environmental Services
"Draft Climate Action Discussion Paper: Foundation for a Community Climate Action Plan," 2010

City of Kelowna

TOTAL REDUCTION INITIATIVES
400,169 Reduction (tonnes)
33% Reduction from 2007 levels

CLIMATE ACTION

City of Kelowna

CLIMATE ACTION AGENDA

1. Senior Government Direction
2. Kelowna's Greenhouse Gas Emissions
3. Corporate Plan
4. Community Plan
5. Questions

IMAGINE A COMMUNITY THAT...

- Is compact and walkable
- Protects and preserves the natural environment
- Has walking and cycling routes connected to key destinations
- Has cleaner air, less pollution, stronger neighbourhoods and active, healthy citizens
- Creates a balance between environmental protection and economic growth
- **Reduces greenhouse gas emissions.**

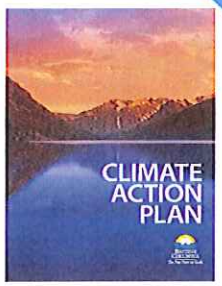
FEDERAL DIRECTION

- The Federal target is to reduce GHG emissions by 17% from 2005 levels by 2020
- Kelowna voluntarily signed Partners for Climate Protection in 2001

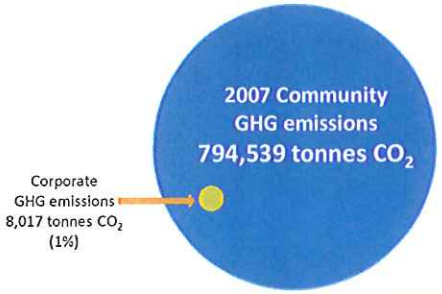
PARTNERS FOR CLIMATE PROTECTION
For a Better Quality of Life

PROVINCIAL DIRECTION

- The Provincial target is to reduce GHG emissions by 33 per cent below 2007 levels by 2020
- Kelowna voluntarily signed the Climate Action Charter in 2007
- The Province mandated all municipalities to amend their OCP to include:
  - A community greenhouse gas (GHG) reduction target
  - Policies and actions to achieve the target



COMMUNITY VS. CORPORATE EMISSIONS



COMMUNITY VS CORPORATE EMISSIONS

FUNDING FROM FEDERATION OF CANADIAN MUNICIPALITIES (FCM)

- FCM Grant of $90,750
  - $66,500 Corporate Plan
  - $24,250 Community Plan
- Community Plan to be completed and endorsed by Council by May 2012 to receive remainder of the corporate and community grant

FCM | Green Municipal Fund / Fonds municipal vert

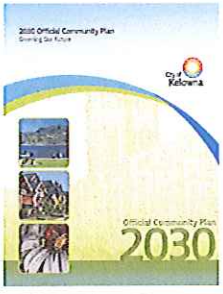
Corporate Energy and GHG Emissions Plan

CORPORATE ENERGY AND GHG EMISSIONS PLAN

- Identified opportunities to reduce corporate GHG emissions by 22% by 2017
- Numerous departments involved in this Corporate Plan
- General Strategic Priorities funding for emission reduction projects at Airport and Waste Water Treatment Facility
- Developing a Carbon Energy Reserve Fund for future projects

KELOWNA'S GREENHOUSE GAS EMISSIONS TARGET

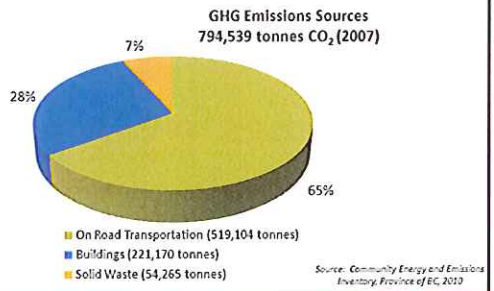
"The City of Kelowna will, in partnership with: senior governments; local residents and businesses; NGOs; external agencies; and utility providers, work towards reducing community greenhouse gas emissions by 33% (from 2007 levels) by 2020"



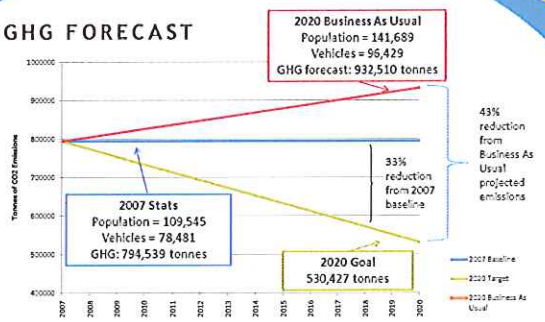
CENTRAL OKANAGAN TARGETS

- Reduce GHG emissions by 33% below 2007 levels by 2020 is the target for:
  - City of Kelowna
  - District of West Kelowna
  - District of Peachland
  - District of Lake Country
- Regional Growth Strategy target: still being determined.

KELOWNA'S COMMUNITY GHG EMISSIONS



GHG FORECAST



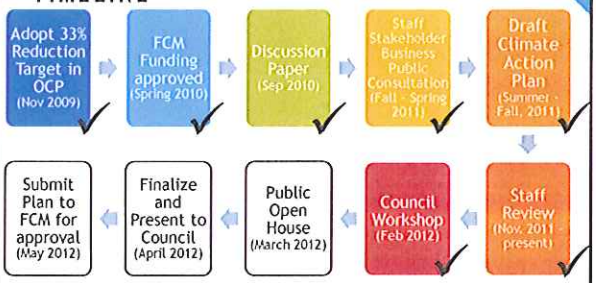
CAN'T WE PLANT TREES?

- Tree Canada estimates that the average tree removes 9.2 kg (0.0092 tonnes) of CO2 annually
- To remove 400,169 tonnes of CO_2 annually, we need to have 43.5 million trees in Kelowna by 2020!
- Important to preserve and enhance our urban forest but this is only one of many initiatives to achieve the goal

Currently 3.3 million trees in Kelowna

Community Climate Action Plan

COMMUNITY CLIMATE ACTION PLAN TIMELINE

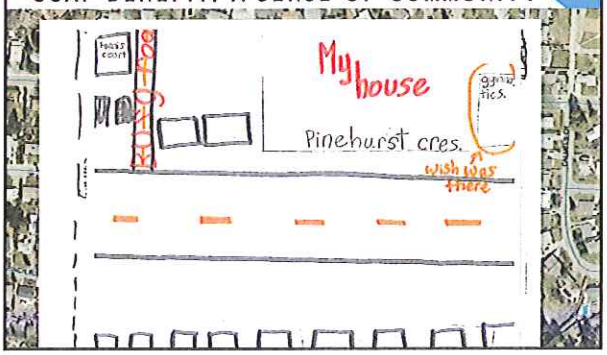


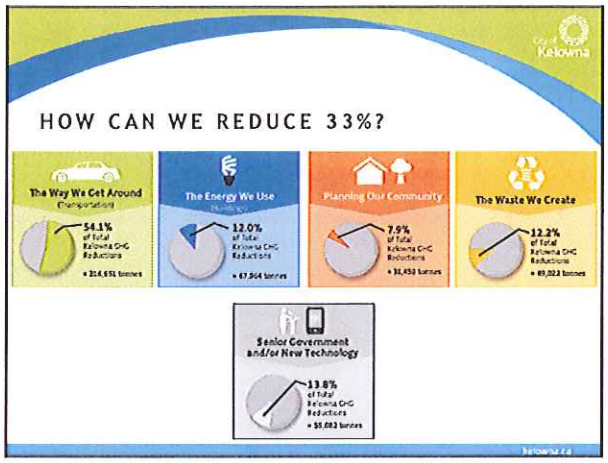
CCAP BENEFIT: SAVING MONEY

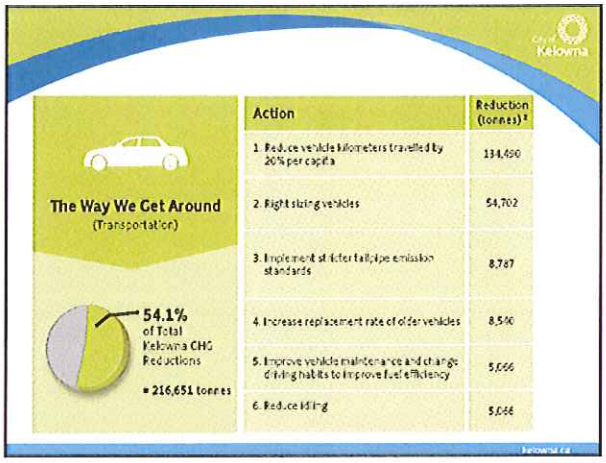
- Gas prices are rising
  - September 2010 - 108.9 cents/litre
  - February 2012 - 122.9 cents/litre
- Cost to own/operate a minivan for 1 year = $11,591. Cost for an annual bus pass = $720
- A truck can cost $1500 more in fuel annually than a small car
- Rates increased 6.6% for FortisBC customers in 2011

CCAP BENEFIT: CREATING A HEALTHIER COMMUNITY

CCAP BENEFIT: A SENSE OF COMMUNITY




HOW CAN WE REDUCE 33%?
The Way We Get Around
54.1%
The Energy We Use
12.0%
Planning Our Community
7.9%
The Waste We Create
12.2%
Senior Government and/or New Technology
13.8%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5. Improve vehicle maintenance and change driving habits to improve fuel efficiency
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6. Reduce idling
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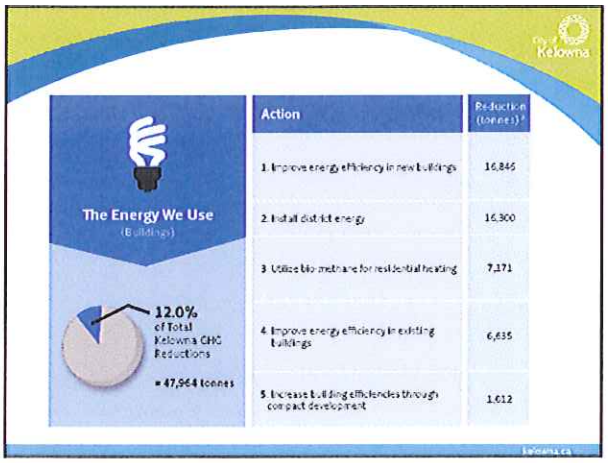
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2. Install district energy
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3. Utilize bio-methane for residential heating
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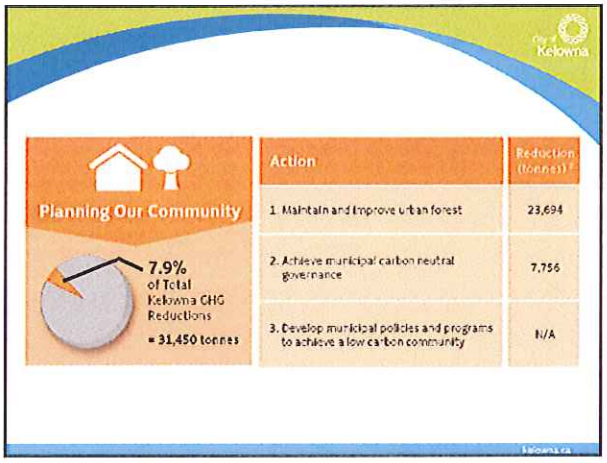
4. Improve energy efficiency in existing buildings
6,635
5. Increase building efficiencies through compact development
1,612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2. Achieve municipal carbon neutral governance
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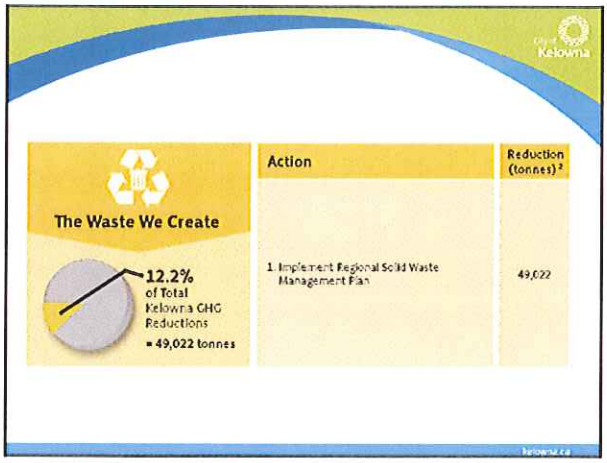
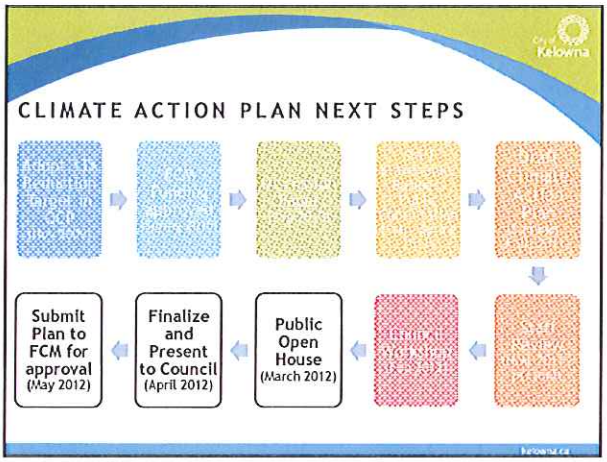
3. Develop municipal policies and programs to achieve a low carbon community
N/A


The Waste We Create
12.2%
of Total
Kelowna GHG
Reductions
= 49,022 tonnes
Action
Reduction (tonnes)²
1. Implement Regional Solid Waste Management Plan
49,022


CLIMATE ACTION PLAN NEXT STEPS
Submit Plan to FCM for approval (May 2012)
Finalize and Present to Council (April 2012)
Public Open House (March 2012)


CLIMATE SUMMIT
WHAT IF IT'S A BIG HOAX AND WE CREATE A BETTER WORLD FOR NOTHING?
• ENERGY INDEPENDENCE
• PRESERVE RAINFORESTS
• SUSTAINABILITY
• GREEN JOBS
• LIVABLE CITIES
• RENEWABLES
• CLEAN WATER, AIR
• HEALTHY CHILDREN
• ETC. ETC.