



## Our Commerce, Our Climate, Our Community

### Business Sector Consultation Comments

#### Wednesday, December 8



The City of Nelson and the Nelson and District Chamber of Commerce co-hosted a meeting to solicit input from local business and those interested in economic development, including City Councillors and staff, to help inform development of a community plan to reduce greenhouse gases and advance energy sustainability. The meeting's primary consultation objectives were:

1. *Preliminarily explore trends that will impact the local economy and should be considered in a local action plan,*
2. *Preliminarily identify actions local businesses would like to take and resources needed to strengthen the energy and emission profile of their businesses.*

With further analysis, including high level evaluation of the technical, resource, economic, policy potential, these ideas will help shape a draft Plan. A summary precedes the consolidated comments.

### Summary

#### Major Trends, Challenges & Opportunities

Participants identified the following 10-20 year trends and associated challenges and opportunities that will influence the local economy and should be considered in *local* energy sustainability and GHG reduction planning.

- **Energy prices**, notably gasoline and diesel but also electricity are expected to rise. This will increase transportation costs and the costs of most goods including food – most of which are heavily oil dependent.
- **Certain rapid technological changes** with commensurate cost reductions create some local opportunities:
  - **Renewable heating and green building innovations** can improve energy and emission performance, and provide some employment opportunities.
  - **Information technologies** are increasingly permitting people to work or run businesses remotely.
- **Some workforce and demographic changes** will have significant economic and social implications:
  - Amongst the many implications of an **aging population** is reduced mobility and an ongoing need to easily access goods and services.
  - A bulge of **business owners will retire** not far off into the future and there is a risk these local businesses will not continue.
  - A growing percentage of the **local work force lives outside the City** due to both housing affordability and lifestyle choices. There are GHG implications, and economic vulnerability with rising fuel costs.
  - A growing percentage of **people are able to work or run businesses remotely** – economic and entrepreneurial nomads.
- Expected **climate changes** include reduced water availability, hotter summers, and higher forest fire risks.

#### Potential Actions

The following actions were identified to minimize risk and maximize opportunity associated with these trends

- Promote green buildings and renewable energy to improve energy and emission performance of existing buildings, and strengthen this local industry.
- Strategically promote local/regional goods production (food and agriculture for example) to reduce vulnerability at the margins to rising cost of goods.
- Encourage people who can work or run businesses remotely to locate in Nelson. Develop the needed infrastructure.
- Reduce local economic vulnerability to rising transportation costs through increased housing affordability and more efficient regional transportation including more energy efficient vehicles, ride sharing and improved transit.
- Attract or promote young entrepreneurs to fill the gap that will be left by retiring local business people.
- Establish adaptation plans to major climate change risks such as increasing the efficiency of water use, and extending setbacks from forest.



## Low Carbon Business Plan Top Priorities

The following priority actions and considerations were identified to reduce GHGs and use energy more sustainably in local businesses.

Actions Actions businesses would like to take	Barriers Challenges to taking action	Breakthroughs Opportunities that support action	Local Resources Exist: <input checked="" type="checkbox"/> To develop: <input checked="" type="checkbox"/>
<b>Buildings</b>			
<b>Energy Retrofits****</b> <ul style="list-style-type: none"> <li>→ envelope/window efficiency</li> <li>Improve heat supply including high efficiency furnaces, heat pumps, biomass/solar thermal heating</li> </ul>	<ul style="list-style-type: none"> <li>High upfront costs / time</li> <li>Rental buildings</li> <li>Unique heritage buildings needs</li> <li>Federal rebates eliminated</li> <li>Knowledge</li> </ul>	<ul style="list-style-type: none"> <li>Long term savings</li> <li>Reduce long term risk</li> <li>Increase building value</li> <li>Significant local forest supply</li> <li>Keep money in community</li> </ul>	<ul style="list-style-type: none"> <li>Local, knowledgeable contractors <input checked="" type="checkbox"/></li> <li>Nelson Hydro could potentially develop a retrofit program <input checked="" type="checkbox"/></li> <li>Certified energy auditors: trades with right skills/certs may not exist</li> </ul>
<b>Travel &amp; Meetings</b>			
<b>High Tech Meeting Options****</b> <ul style="list-style-type: none"> <li>Take advantage of technologies for meeting alternatives, e.g. web meetings, low tech video (skype), and high tech video conferencing</li> </ul>	<ul style="list-style-type: none"> <li>Knowledge of technology</li> <li>Client confidence in technology</li> <li>Doesn't replace face to face meets</li> <li>Rapid changing technologies – soon may be widely available</li> </ul>	<ul style="list-style-type: none"> <li>Savvy tech people live here</li> <li>Local companies/orgs likely use video conferencing, e.g. Community Futures, CBT, City, Fortis/Terasen</li> <li>Save money</li> </ul>	<ul style="list-style-type: none"> <li>Training <input checked="" type="checkbox"/></li> <li>Internet is local <input checked="" type="checkbox"/></li> <li>Local Biz Centre, Community Futures or library provide video conference for low/no cost</li> </ul>
<b>Low Emission Vehicles****</b> <ul style="list-style-type: none"> <li>High efficiency vehicle purchase, e.g. LEV, hybrid, electric...</li> </ul>	<ul style="list-style-type: none"> <li>High capital cost / Low selection</li> <li>Need all wheel drive year round</li> <li>Limited electric charging locations</li> </ul>	<ul style="list-style-type: none"> <li>Reduce operation and maintenance costs</li> </ul>	
<b>Procurement</b>			
<b>Buy Local*****</b> <ul style="list-style-type: none"> <li>Buy locally made, grown where possible and feasible</li> </ul>	<ul style="list-style-type: none"> <li>Often higher cost</li> <li>Local quality not always best</li> <li>Availability of goods</li> <li>Locally sourced is not locally made</li> </ul>	<ul style="list-style-type: none"> <li>Better/expanded businesses</li> <li>Support local economy</li> <li>New business venture</li> <li>Educating staff</li> </ul>	<ul style="list-style-type: none"> <li>Lots of local entrepreneurs, skilled people <input checked="" type="checkbox"/></li> </ul>
<b>Low Carbon Purchasing Policy***</b> <ul style="list-style-type: none"> <li>Factor energy and emissions into purchasing</li> </ul>	<ul style="list-style-type: none"> <li>Price premium</li> <li>lowest cost not least CO2 intensive</li> <li>Product carbon footprint info</li> <li>Educating staff</li> </ul>	<ul style="list-style-type: none"> <li>Educate/provide guidance to staff, suppliers</li> </ul>	
<b>Operation &amp; Maintenance</b>			
<b>Education &amp; Training***</b> <ul style="list-style-type: none"> <li>Educate workers, clients</li> <li>HVAC, Power down, lights off</li> </ul>	<ul style="list-style-type: none"> <li>Disinterest</li> <li>Time, effort, money</li> <li>Landlord/renter</li> </ul>	<ul style="list-style-type: none"> <li>Interest, concern</li> </ul>	<ul style="list-style-type: none"> <li>Shared program <input checked="" type="checkbox"/></li> </ul>
<b>Cross Cutting Priorities</b>			
<b>Business GHG Reduction Plan***</b> <ul style="list-style-type: none"> <li>Complete Inventories, plans, monitoring</li> </ul>	<ul style="list-style-type: none"> <li>Low energy price</li> <li>Time</li> <li>Knowledge</li> </ul>	<ul style="list-style-type: none"> <li>Energy saving result in cost saving</li> <li>Staff morale</li> <li>Sr Management Engagement is key</li> </ul>	<ul style="list-style-type: none"> <li>Shared program <input checked="" type="checkbox"/></li> </ul>

## Consolidated Comments

### Trends, Opportunities, Challenges, Actions

- Major 10-20 year trends that will influence our economy and should be considered in *local* efforts to promote energy sustainability and greenhouse gas reductions.
- How these trends create opportunities and challenges for local businesses.
- Actions that will most effectively minimize risk and maximize opportunity associated with these trends.

Trend	Opportunity & Challenge	Action
Rising energy prices, notably gasoline and diesel ("Peak Oil") but also electricity	<ul style="list-style-type: none"> <li>• Changing consumption patterns</li> <li>• Renewable energy relatively more cost effective</li> <li>• New energy systems will emerge</li> <li>• Rising food costs</li> <li>• Cost of everything increases</li> </ul>	<ul style="list-style-type: none"> <li>• Reduce energy demand through conservation and efficiency</li> <li>• Diversify energy supply, increase renewables</li> <li>• Reduce dependence on fossil fuel</li> <li>• Capitalize on existing hydro resources IPP's(cottonwood falls)</li> <li>• Promote local/regional/community agriculture and food</li> <li>• Potential for re-localization. Opportunity for local businesses-lumber , food, manufacture, retail</li> </ul>
Advancement in technology and shifting work norms	<ul style="list-style-type: none"> <li>• Renewable energy more cost effective</li> <li>• Technology permits "nomadic entrepreneur" "economic nomads" (need a place to plug in, meet, IT access)</li> </ul>	<ul style="list-style-type: none"> <li>• Ramp up renewable energy investment</li> <li>• Centralized business center – meeting rooms, business shared video conference center, etc. to attract <i>economic nomads</i></li> </ul>
Green building technology and design: rapid innovations	<ul style="list-style-type: none"> <li>• Lower costs for high efficiency home</li> <li>• Significantly lower operation &amp; maintenance cost for buildings</li> <li>• Renewable heat becomes cost effective</li> <li>• Recovery system and other energy saving technology</li> </ul>	<ul style="list-style-type: none"> <li>• Create an environment where it is easier to build green homes</li> <li>• Support building scale renewables</li> <li>• Retrofit older- city owned building with local talent</li> </ul>
Climate change	<ul style="list-style-type: none"> <li>• Lower snow pack-change in hydrology</li> <li>• Water insecurity</li> <li>• Hotter summer – a lot of fires</li> <li>• Huge wild fire interface</li> <li>• Policies to reduce emissions</li> </ul>	<ul style="list-style-type: none"> <li>• Will need adaption plans</li> <li>• Need a water conservation strategy</li> </ul>
Changing demographics	<ul style="list-style-type: none"> <li>• Aging population <ul style="list-style-type: none"> <li>◦ Rising health care costs and reduced tax base – rest of population will need to control costs</li> <li>◦ Mobility</li> <li>◦ Many business owners will retire in next 20 yrs and limited young business owners</li> </ul> </li> <li>• Part time home owners <ul style="list-style-type: none"> <li>◦ Rising housing prices</li> </ul> </li> <li>• Growing percentage of Nelson workforce lives outside muni <ul style="list-style-type: none"> <li>◦ 40~50% currently</li> <li>◦ Highly vulnerable with rising gas prices</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Promote healthy living to reduce health care costs</li> <li>• Make city easier to get around, walking infrastructure, accessible shops</li> <li>• Promote entrepreneurship, especially young</li> <li>• Need more local affordable housing</li> <li>• Need more affordable/less vulnerable inter-city transportation</li> </ul>

RD Plans	<ul style="list-style-type: none"> <li>Rising transportation demand/GHGs</li> </ul>	
Increasingly transportation dependent community	<ul style="list-style-type: none"> <li>Almost half of Nelson workforce currently lives outside Nelson</li> <li>Growing GHGs</li> <li>Vulnerable to rising gasoline prices</li> <li>Many locals work elsewhere</li> <li>Vast majority of goods imported</li> </ul>	<ul style="list-style-type: none"> <li>Need regional transportation plan that works</li> <li>Electric vehicles needed</li> <li>Stronger mass transit needed</li> <li>•</li> </ul>
Growing expectation for municipal services	<ul style="list-style-type: none"> <li>Not possible to deliver all these services with existing (shrinking) tax base</li> </ul>	<ul style="list-style-type: none"> <li>Need to optimize costs, think more holistically about service delivery</li> </ul>
Low connection with nature		
Population migration		
Legalization of marijuana		
Economic disparity	<ul style="list-style-type: none"> <li>No consensus</li> </ul>	



## My Low Carbon Business Plan – Consolidated Comments

The following consolidated comments were from individual business people to the question: What would *I like to do* to reduce greenhouse gas emissions and use energy more sustainably in my business or organization? Note: City staff, too, were active in this meeting. **Yellow highlights** identify actions of greatest interest. **Green highlights** identify additional key planning considerations.

<b>Actions</b> <i>Actions businesses would like to take</i>	<b>Barriers</b> <i>Challenges to taking action</i>	<b>Breakthroughs</b> <i>Opportunities that support action</i>	<b>Local Resources</b> <i>Exist: <input checked="" type="checkbox"/> To develop: <input type="checkbox"/></i>
<b>Buildings</b>			
<ul style="list-style-type: none"> <li>Building Energy audit ✓✓</li> </ul>	<ul style="list-style-type: none"> <li>Cost ✓✓</li> <li>Rental buildings (not main owner)</li> <li>Time</li> </ul>	<ul style="list-style-type: none"> <li>Local provider for energy efficiency services?</li> </ul>	<ul style="list-style-type: none"> <li>Certified energy auditors <input checked="" type="checkbox"/> ?</li> </ul>
<b>Retrofit: efficiency</b> ✓✓✓✓ <ul style="list-style-type: none"> <li>Improve insulation-building and windows</li> <li>R-28 walls, R-60 roof, triple glazing</li> </ul>	<ul style="list-style-type: none"> <li>Cost✓</li> <li>Changing thinking/getting buy-in</li> <li>Federal rebate programs eliminated</li> </ul>	<ul style="list-style-type: none"> <li>Long term savings</li> <li>Reduce long term risk</li> <li>Opportunity to empower employees- give them lead (City)</li> </ul>	<ul style="list-style-type: none"> <li>Local contractors <input checked="" type="checkbox"/></li> </ul>
<b>Retrofit: Power</b> ✓✓✓ <ul style="list-style-type: none"> <li>Greater power self sufficiency; off grid power options</li> <li>Wood and wind power (general)</li> </ul>	<ul style="list-style-type: none"> <li>Knowledge</li> <li>Affordability of alternative power systems</li> <li>Very few wind operations in BC</li> </ul>	<ul style="list-style-type: none"> <li>Low cost power independent of the grid</li> <li>Investing in wind power will have long term benefits</li> <li>Lots of trees and wind in B.C</li> </ul>	<ul style="list-style-type: none"> <li>Solar and small hydro companies (?)</li> </ul>
<b>Retrofit: electricity</b> ✓✓✓ <ul style="list-style-type: none"> <li>Electric efficiency ( appliances, lighting design)</li> <li>LEDs, natural lighting</li> </ul>	<ul style="list-style-type: none"> <li>Low cost of power</li> </ul>	<ul style="list-style-type: none"> <li>Savings</li> </ul>	<ul style="list-style-type: none"> <li>Social marketing /education <input checked="" type="checkbox"/></li> </ul>
<b>Retrofit: heating</b> ✓✓✓✓✓ <ul style="list-style-type: none"> <li>High efficiency furnace/boiler</li> <li>Use heat pump technology</li> <li>Solar thermal for heating and cooling</li> <li>High efficiency biomass heating</li> </ul>	<ul style="list-style-type: none"> <li>Heritage building</li> <li>Cost/funding ✓✓✓</li> <li>Low energy prices</li> <li>Hydro electricity low cost (heating?)</li> <li>Initial capital cost</li> </ul>	<ul style="list-style-type: none"> <li>Unique model of heritage sites</li> <li>Energy savings = cost savings-can potentially fund a program</li> <li>Increase value of home/office</li> <li>Reduce long term risk</li> </ul>	<ul style="list-style-type: none"> <li>Incentives for upgrade of heritage buildings <input checked="" type="checkbox"/></li> <li>Strong/local knowledgeable contractors <input checked="" type="checkbox"/></li> <li>Nelson Hydro could potentially develop a retrofit program <input checked="" type="checkbox"/></li> </ul>
<ul style="list-style-type: none"> <li>City street, building light upgrades (almost complete)</li> </ul>	<ul style="list-style-type: none"> <li>Installation cost</li> </ul>	<ul style="list-style-type: none"> <li>Energy savings, reduce taxes</li> </ul>	
<b>Conservation/behavior</b> ✓✓	<ul style="list-style-type: none"> <li>Existing behavior</li> </ul>	<ul style="list-style-type: none"> <li>Concern/interest</li> </ul>	<ul style="list-style-type: none"> <li>Social marketing /education <input checked="" type="checkbox"/></li> </ul>

• Turn heat down	• Disinterest		
• Turn lights off			
<b>Actions</b>			
<b>Travel &amp; Meetings</b>			
• Internet meeting tools: web meetings, low-tech video (skype +) ✓✓✓✓✓	• Knowledge of technology • Client confidence in technology • Doesn't replace face to face	• Local people familiar with technologies (savvy tech people live here)	• Training <input checked="" type="checkbox"/> • Internet is local <input checked="" type="checkbox"/>
• Video conferencing ✓✓✓✓✓	• In person meetings still valuable • Rapid changing technologies – soon may be widely available • Helping clients get comfortable with technology • Doesn't replace face to face	• Is there a local company/organization with video conferencing services to rent e.g. Community Futures, CBT, Fortis/Terasen	• Local Business Centre (?) • Library (?) • Community Futures may make video conferencing available
• High efficiency vehicle purchase/trade ✓✓✓✓✓✓ • Electric/hybrid for trips to Nelson ✓✓✓✓✓ • Charge electric vehicle with on site power	• High capital cost • Need all wheel drive year round ✓✓ • Long term grid capacity for EVs	• Electronic vehicles are coming on the market	• More local options
• Local/regional biodiesel production and use in fleets, businesses ✓✓	• Uncertain of local feedstock • No local producer • Good and bad diesel	• There would be good local demand	
• Use transit for meetings ✓✓✓	• Low frequency • No service to key destinations • Large, expensive buses	• Improve service: frequency and destinations • Light rail in Nelson • lobby/work for stronger systems	• We have City and regional transit services <input checked="" type="checkbox"/>
• Change behavior, e.g. high efficiency driving habits; reduce trips by chaining and better planning ✓✓✓	• Changing habits	• Save \$ • Need training programs	
• Install bike racks at my business	• Cost • Change of habits • Topography for bikes not great		
• Telecommuting (at least some of wk for me and my staff) ✓✓	• Confidence in productivity • Need for face to face time	• Reduce business costs • Improve employee satisfaction	



• Power down, lights off			
• Improved HVAC operation ✓✓	• Knowledge • Landlord total disinterest	• Not much could move landlord	
• Need policy and leadership	• People take easiest option and are busy	• Education and role modeling • Senior management leadership critical	
<b>Waste</b>			
• Require on-site recycling ✓✓	• Hard to do 100%-busy people	• Business opportunity for local operator • bonus for new ideas	
• Phase out open wood burning, divert wood for local energy use		• Require high efficiency stoves	
• Move to paperless system	• People take easiest option, and are busy	• Educate employees	
• Double-sided policy	• People take easiest option, and are busy	• Educate employees	• Good copy machine <input checked="" type="checkbox"/>
• On site recycling for construction projects to divert construction waste for re-use, energy	•		
<b>Site &amp; Location</b>			
• Plant trees for summer shading			
• Enhance building design for solar gain in winter			
• Install Bike racks			
• Strengthen urban trails ✓	• Budget	• Include in budget • Potential grants	• Local volunteers
• Build smart home office (passive)	• High real estate price (property)		
<b>Cross-Cutting Priorities</b>			
• Measuring energy and emissions activity (especially outside buildings)	• Knowledge • Time • Cost	• Interest	•
• Learn about energy and emissions, e.g. carbon footprints, solutions	• Time • Cost • Access to resources	• Interest	
• Business GHG-reduction / sustainability plan ✓✓✓	• Low energy price (impact ...)	• Energy saving result in cost saving	

## Participants

1	Best, Leah	Touchstones Museum and Archives
2	Boston, Alex	HB Lanarc, Nelson Climate and Energy Action Plan Project Manager (consultant)
3	Brillon, Marc	Ellenwood Homes
4	Charlesworth, Kim	Councillor, City of Nelson, Environ Cttee; Climate/Energy Steering Cttee
5	Cherbo, Robin	Councillor, City of Nelson
6	Cormack, Kevin	Climate/Energy Steering Cttee
7	James, Adam	Community Energy Association, Facilitator (consultant)
8	Johnson, Dallas	City, Planner, Climate/Energy Steering Cttee
9	Kiss, Paula	The Building Tree/APC/CHC
10	Knox, John	Local Realtor
11	Macdonald, Donna	Councillor, City of Nelson, Environ Cttee; Climate/Energy Steering Cttee
12	Moore, Kathy	Councillor, City of Rossland
13	Reasonor, Mel	Working Group #5 Member (Path to 2040); Climate/Energy Steering Cttee
14	Thompson, Tom	Chamber of Commerce
15	Thomson, Alan	Advisory Planning Commission
16	Turgeon, Sylvain	
17	Weston, Blair	Fortis; Climate/Energy Steering Cttee
18	White, Richard	Working Group #2 Member (Path to 2040)

## Prepared By

HB Lanarc with Community Energy Association

