Report of the Canadian Parliamentary Delegation to the Pacific NorthWest Economic Region (PNWER) Economic Leadership Forum

Canada-United States Inter-Parliamentary Group

Whistler, British Columbia, Canada November 15-17, 2007

Report

From 15-17 November 2007, members of the Canada-United States Inter-Parliamentary Group attended the Economic Leadership Forum of the Pacific NorthWest Economic Region in Whistler, British Columbia. This report summarizes the points that were made during the plenary and selected concurrent sessions.

FOSTERING A CLIMATE OF INNOVATION

Anne Garrett, Consultant

- a 2007 survey reveals that:
 - innovation remains a top strategic focus
 - spending on innovation is expected to rise
 - many executives are unhappy with the financial return on innovation, recognizing that the return is hard to measure
 - key issues include a risk-averse culture, the development time and internal coordination
- an "idea" is a concept formed in the mind
- an "invention" is an object, process or technique, perhaps based on earlier development
- "innovation" involves the successful exploitation of new ideas or inventions
- key elements of a successful innovation culture include:
 - integrate it into company strategy
 - "own" it at a high level
 - involve business units at all stages
 - ensure that the right human resources policies are in place
 - use external resources at all stages of the process
- increasingly, employees as well as employers are selected on the basis of their "attitude"
- regarding an innovation culture, there are three stages:
 - idea generation there are lots of ideas at the grassroots level, and selection criteria are needed in order to select among ideas
 - conversion of ideas into innovation good product management expertise is needed, as is prototyping for proof of concept into market
 - diffusion there must be a transfer into existing or new businesses

- there is a need to capture and promote the cross-pollination of ideas
- the use of external collaborators is increasingly necessary, but there should be central control
- "culture challenges" are the most often-cited reason for failure
- there are three company models in respect of innovation:
 - just do it
 - talk about it
 - build it into the business strategy
- having a diverse culture is an important competitive advantage, since it provides different perspectives

Lewis Rumpler, Institute for Systems Medicine

- there is little innovation in the pharmaceutical sector and there have been few new drug approvals in the last 30 years
- it is costing relatively more now in research and development in order to generate the same level of drug approvals
- ➤ it is predicted that, in the United States, health care spending will double by 2016; there should be an increased focus on preventive and predictive approaches
- people are still dying from disease, and costs are escalating; in order to reduce costs, there should be prevention and intervention early in the disease continuum
- > we are all living longer and more productively
- > there should be incentives/disincentives for those with healthy/unhealthy behaviours
- the future of medicine is P4: predictive, preventive, personalized and participative
- an important consideration is the discovery of new biomarkers in order to monitor disease emergence and progression
- it is less expensive to prevent a disease than to cure a disease
- there is an increasing focus on personalized drugs rather than blockbuster medicines
- the economic model of health care must change

TECHNOLOGY-BASED ECONOMIC DEVELOPMENT INITIATIVES

Jack Brummel, Counsel for the Washington State Senate Economic Development, Trade & Management Committee

- Washington State's Bill 1091 addresses innovation research and commercialization
- the economy can be thought of as a series of clusters, where a "cluster" is a geographic concentration of firms; there should be a focus on sectors, such as manufacturing, rather than on industries, such as automotive
- > there are three key factors in thinking about how the economy moves forward in respect of innovation:
 - niche investments in knowledge assets
 - technology, entrepreneurship and structure
 - leadership, organization and high-level champions
- with the Washington State legislation, local leaders must undertake three actions in order to be designated as an innovation partnership zone and thereby to access funds; they must examine:
 - research capacity at universities and colleges in the region
 - globally competitive research firms in the region
 - training capacity in the region
- clusters with a comparative advantage should be identified, and then their strengths, weaknesses, opportunities and threats should be analyzed
- there is a difference between the economic rate of return and the investment rate of return
- intellectual property is an intangible asset
- three people, each with a piece of the puzzle, can come together to form the solution to a problem

Catherine Barclay, Western Economic Diversification Canada

- two of the five areas in which an advantage is being sought pursuant to the federal Advantage Canada initiative are:
 - entrepreneurial advantage reduce unnecessary regulation and red tape as well as increase competition in the Canadian marketplace
 - knowledge advantage create the best-educated, most-skilled and most flexible workforce in the world
- analysis suggests that the commercialization of innovation and technology has been very important for Western Canada
- challenges include:

- a small, diverse population with no critical mass
- a heavy reliance on energy resources
- research and development infrastructure between British Columbia and Alberta on the one hand and Saskatchewan and Manitoba on the other hand
- with strong economic growth in Western Canada at the moment, there are challenges in respect of how to manage that growth

HOW COLLABORATION TOOLS CAN CHANGE THE WAY YOU WORK

Jerry Kaczmarowski, Slalom Consulting

- > online collaboration tool capabilities include:
 - blogs
 - wikis
 - social networking sites
 - online communities
 - document collaboration tools
 - discussion groups
 - real-time collaboration
- Yet2.com is a technology clearing house that focuses on bringing buyers and sellers of technology together
- in Ontario, Gold Corporation took a risk in sharing proprietary geological data on the internet and challenged viewers to help them determine where to mine; the \$500,000 prize resulted in the choice of a location yielding \$154,000,000 annually in revenues; in this case, a big risk led to a big return
- opening the door to cross-company collaboration can generate very real economic benefits
- increasingly, collaboration tools are being used to collaborate across organizational boundaries

PUTTING TECHNOLOGIES TO WORK: FROM CONCEPT TO COMPANY

Paul Coleman, Girvan Institute of Technology

- technology is, or will be, the lifeblood of the economy
- innovations should be converted into economic assets
- North America is the best in the world at technology transfer and commercialization, but the rest of the world is becoming better and at a faster rate than in North America

- technology transfer and commercialization must occur more quickly and in a more cost-effective manner; as well, the process must be more transparent to the investment community
- ways must be found to make careers in science and technology more appealing to youth; as well, the manner in which these topics are taught in the classroom must be more appealing

Evan Epstein, Girvan Institute of Technology

- > the Pacific NorthWest Innovation Network (PNWIN) should be the benchmark in respect of technology transfer
- the PNWIN should examine possibilities in order to increase the productivity of research and development funds in terms of intellectual property
- legislation may be needed in order to create an environment for innovation and commercialization
- the PNWIN should review the local innovation funding sources, and should undertake to develop/partner and test an efficient method to "seed fund" local projects
- there is a need to bridge the equity gap; while there appears to be significant funding available to finance large projects, there are comparatively few funds to finance relatively smaller projects
- the PNWIN should consider forming public-private partnerships for the development of the region's economy
- the PNWIN should consider fostering the establishment of investment arms of companies involved in the management of national laboratories in the region
- the PNWIN should try to integrate systematic workforce development into its economically focussed programs

Andrew Quintero, The Aerospace Corporation

- inventors are generally not particularly well suited to be the Chief Executive Officer of any business that may be a consequence of their inventions
- technology transfer involves finding a marketplace that can take advantage of what has been developed; spinning out a new company may not be the best option
- "fail fast and often with a winning attitude"

HOW CAN WE DO BETTER AS A REGION?

Richard Lee, Member of the British Columbia Legislative Assembly

- in terms of labour force challenges, it should be remembered that there is a great deal of talent available, especially in China
- > there should be a regional dialogue in respect of climate change

Michael Hagood, Idaho National Laboratory

- > policy can act as a barrier or as an incentive
- legislators should not choose "technology winners"
- technology transfer is a contact sport
- there should be a regional dialogue in respect of energy challenges and climate change

Lee Cheatham, Washington Technology Center

- challenges vary from community to community
- the lack of public understanding can be a barrier
- place-based assets must be recognized, and the "urban focus" must not be too great
- every place has a unique quality of life
- it is not practical to put a university in every community
- policy should not pick the "winners"
- there should be a regional dialogue in respect of regional water rights

Lori Ackerman, Councillor, Fort St. John, British Columbia

- the barriers to innovation include workforce challenges
- "place" does not really matter, provided there is access to professionals
- there should be a regional dialogue in respect of intellectual property issues

REGIONAL WORKFORCE MOBILITY CHALLENGES & OPPORTUNITIES

William Roberts, William Roberts & Associates

- we live in a multi-stakeholder world
- > an inventory of specific barriers to labour mobility, by sector and by region, should be developed

Kerry Jothen, Human Capital Strategies

- the shortage of skilled labour is almost universal
- stakeholders should be involved in identifying the barriers and the solutions to workforce mobility
- at the present time, there are labour mobility issues in such sectors as health care, human resources, construction, agriculture, energy and education, among others
- the most important barriers to labour mobility in the Pacific Northwest are related to the recognition of credentials and certifications, workplace culture, inconsistent occupational standards, the cost of living, visas and work permits, and union closed shop clauses, among others
- in terms of labour mobility, the flow of commerce and border issues, it should be noted that: border officers lack adequate information; the border is controlled by

governments that may be more focussed on security than on commerce; and commerce finds a way around the barriers that are put in place, which raises the question of whether some barriers exist for good and valid reasons

CLIMATE CHANGE

Joshua Bushinsky, Pew Center on Climate Change

- cap-and-trade systems are the foundational tool for addressing climate change
- a key challenge is how to improve economic well-being while reducing greenhouse gas emissions
- regarding climate change policy, there has been a dramatic and rapid change in the U.S. Congress in the last two years; public opinion has also undergone significant change and the public is pushing legislators to act
- ➤ to date this year, there have been 125 climate-change-related hearings in Congress, double those in any other Congress
- states are also taking climate change seriously; nearly every state is doing something, including targets for emissions reduction, the development of climate change action plans, the reporting of greenhouse gas emissions, etc.
- businesses are seeking regulatory certainty in order to evaluate their risks and opportunities
- a cap-and-trade mechanism makes sense because climate change is a global problem requiring global solutions
- what gets measured gets managed

REGIONAL CLIMATE CHANGE POLICY

Honourable Barry Penner, British Columbia Minister of Environment

- at the meeting of the Council of the Federation, the issue of climate change was front and centre; nine out of ten Premiers agreed to adopt the tailpipe emission standards of California
- states and provinces are joining the Climate Change Registry in order to be able to compare apples to apples when measuring progress; what gets measured gets managed
- parties should work together in order to "raise the environmental bar;" competition with each other should not occur by doing things that harm the environment, and competition should occur on the basis of quality and service rather than on of undermining each other's environmental standards
- there is a need for a united front to raise environmental standards in respect of shipping: "meet these standards if you want to use our ports"
- the British Columbia government wants to lead by example

Dave Coutts, Member of the Alberta Legislative Assembly

while the climate change problem is global in nature, personal decisions also affect greenhouse gas emissions

- there is a need to understand what other jurisdictions are going through in order to determine the best solutions
- the Pacific Northwest is the fastest growing region in North America, with population, economic and energy-demand growth; all of these aspects of growth affect the environment
- we must go beyond debating the science of climate change to focusing on mitigation and adaptation
- Alberta is unique in terms of energy production, and is producing energy to meet the needs of society
- Alberta is "under fire" for its contribution to greenhouse gas emissions, and is dealing with the issue; however, there are no quick fixes or silver bullets
- Alberta is a global energy supplier, and energy royalties support the Alberta economy as well as the economies of Canada and all of North America
- as a leader in industrial development, Alberta is seeking new ways in which to produce clean energy
- technology is the key to reducing emissions and increasing efficiency
- Alberta has always supported the idea of carbon capture and storage
- the Alberta Climate Change Action Plan is being updated
- while each province and state has its own climate change issues, cooperation on solutions should occur

Pradeep Kharé, Environment Canada

- the northern portion of the globe will be affected to a relatively greater extent by climate change than will the middle portion of the globe
- precipitation has been erratic: too much, too little, the wrong place at the wrong time, etc.
- climate change affects resources, with implications for forests, fish, etc.
- in terms of reducing greenhouse gas emissions, the system is not prescriptive, and parties have not been told how to achieve goals; rather, industry has been given a suite of options
- sectoral targets should contribute to national targets
- it is important to achieve environmental objectives with a strong and growing economy

Peter Murchie, U.S. Environmental Protection Agency

while mitigation is important, adaptation may be the greater challenge in the Pacific Northwest

- information is required in order to make the best possible choices and to determine the best possible solutions
- the U.S. Environmental Protection Agency works at the regional, state and local levels
- transportation is a significant contributor to greenhouse gas emissions, especially on the West coast

CLIMATE CHANGE POLICY AND ACTIONS: WHERE TO FROM HERE – MITIGATION

Warren Bell, British Columbia Climate Change Secretariat

- in British Columbia, a relatively significant proportion of greenhouse gas emissions is associated with fossil fuel production and transportation
- mitigation options vary by sector; for example:
 - buildings conservation programs, tax incentives, codes and standards, smart metering, rate design, etc.
 - electricity new generation sources, conservation, etc.
 - industry regional cap-and-trade systems, etc.
 - transportation fuel efficient vehicles, fuel carbon content, etc.

Andy Ridge, Alberta Environment

- Alberta has a dispersed population
- in Alberta, 100 facilities account for one-half of provincial greenhouse gas emissions
- Alberta produces oil and gas to satisfy growing North American demand
- in Alberta, there is a reputational risk that must be managed
- industry needs policy certainty as it plans
- the implementation of new technology will be a significant aspect of the long-term solution
- market instruments are needed in order to bridge the gap between current greenhouse gas emissions and long-term solutions
- consumers must be part of the solution
- carbon capture and storage are a key means to reduce the carbon footprint of energy production; at this point, the key barrier is economic, rather than technical
- technological adaptation and adoption on a large scale are needed
- there are a variety of options to achieve targets:

- emission performance credits
- emission offsets
- fund credits

CLIMATE CHANGE POLICY AND ACTIONS: WHERE TO FROM HERE – ADAPTATION

Lara Whitely Binder, University of Washington

- communities cannot be insulated from natural climate variability or from climate change
- communities should be made more resilient
- adaptation plans should be examined to ensure their ongoing relevance as communities, priorities, science and the climate undergo change
- the impacts of climate change in the next few decades are largely unavoidable
- the rate of global warming in the 21st century is expected to be three times greater than in the 20th century; while the higher rate of warming will be seen in all seasons, it will be particularly great in the summer and in the northern part of the globe
- global warming affects water resources; precipitation in the form of rain rather than snow has a profound impact on the snow pack, which has implications for the water supply
- among others, global warming also has implications for:
 - increased summer drought
 - increased winter flooding
 - reduced water supply for irrigation
 - reduced urban water supply
 - wildlife and insects
 - forest fires
 - rising sea levels
 - erosion
 - loss of habitat
 - flooding
 - recreation
 - hydropower
 - reduced growth and regeneration of forests

- decisions with long-term impacts are being made each day, and decisions and choices made today will shape the vulnerabilities of tomorrow
- it takes time to develop adaptive capacity, to implement changes and to motivate behavioural modification
- adaptation must occur at the local level and be supported by the federal level
- local, state and regional governments are on the front line in terms of climate change impacts
- managing the risks associated with climate change is an inherent part of ensuring the health, safety and welfare of communities
- planning for climate change can have benefits today and may lead to new economic opportunities and reduced future costs

Ben Kangasniemi, British Columbia Ministry of Environment

- we are in the early days of adaptation
- adaptation, mitigation and sustainability at the regional level must occur
- regional response plans to climate variability and climate change are needed
- a suite of regional climate change models is required
- a key challenge involves translating complex science into useful information that can be used by decision makers, including politicians, businesses and consumers; in this regard, education and outreach are important

Peter Murchie, U.S. Environmental Protection Agency

- especially on the West coast, transportation is a particularly significant contributor to greenhouse gas emissions
- a key question is whether climate change goals can be achieved with just tailpipe and renewable fuels/low carbon standards; a suite of solutions is needed
- there is a three-legged transportation stool
 - vehicle efficiency
 - reduced greenhouse gas emissions through efficiencies
 - low-carbon fuels
- potential regional opportunities include:
 - a platform for information sharing and networking

- supporting the development and funding of projects
- providing technical expertise and analysis
- outreach
- tracking and measuring projects and programs
- linking to co-benefits for economic development, agriculture, forestry, air quality, water quality, public health, etc.

ROLE OF TECHNOLOGY AND INNOVATIVE SOLUTIONS IN PROMOTING A GREEN ECONOMY

John Keating, Can-Hydro

- the Pacific Northwest region has the potential to be an energy juggernaut for the entire continent; the region needs concerted, coordinated action in order to realize goals and opportunities
- businesses thrive on certainty in respect of contracts, regulation, permitting and approval processes, etc.
- low-impact renewable energy opportunities include:
 - build a more diversified and sustainable electrical grid
 - create new wealth, and provide jobs in rural and remote communities
 - improve the environmental performance of the provincial economy through offsetting fossil-fuel-generated electricity
- low-impact renewable energy challenges include:
 - reluctance within some communities to consider the change associated with project development
 - extensive permitting processes required from municipal, provincial and federal agencies
 - lack of direction and due process in respect of First Nations issues
- lessons learned include:
 - promote extensive dialogue
 - demonstrate leadership
 - address First Nations issues
 - review permitting processes on an ongoing basis

- in Canada, there is enormous potential for the development of low-impact renewable energy sources
- good proximity to the population and transmission systems, as well as abundant natural resources, drive business and economic realities

CLIMATE CHANGE POLICY AND ACTIONS BREAKOUT SESSIONS: TRANSPORTATION

John Hansen, North West Cruise Ship Association

- cruise ship traffic is small relative to freight and container ship traffic, but it is highly visible and many watch the industry; it is important to do things "right" from an environmental perspective
- with the cost of fuel doubling in the last three years, there is an increased focus on such considerations as fuel efficiency and actions to reduce fuel consumption
- the terrorist attacks of 11 September 2001 affected the cruise industry; while before the attacks there were four home cruise ports in North America, while after the attacks the number of home ports grew to twentyfive, with the result that people do not have to fly so far to board a cruise ship

Glen Okrainetz, British Columbia Ministry of Environment

- ➤ in British Columbia, 48% of greenhouse gas emissions are related to transportation
- there are trade-offs among different forms of energy supply; for example, wood is good from an environmental perspective but bad in terms of air quality
- it is important to foster community ownership of the environment
- local community action will drive change

Breakout Session Participants

- areas for collaboration include:
 - a best practices forum with an award
 - a community recognition program
 - education and outreach
 - congestion at the land border
 - "green" ports with similar environmental standards
 - wasting of fuel at airports
 - infrastructure analysis
 - a Pacific NorthWest Economic Region advocacy group focussed on funding

- incentive programs to promote efficiency
- innovative financing mechanisms
- denser communities, or smart growth
- regional transportation planning
- actions for the Pacific NorthWest Economic Region include:
 - mapping of fuel use in the Pacific NorthWest Economic Region (PNWER) area
 - laws to assist legislators
 - exploration of the economic ramifications of different fuels
 - PNWER assistance in networking
 - broadening of the NORPASS concept
 - verification of the amount of fuel wasted at airports in respect of idling aircraft, aircraft take-off and landing, etc.
 - education and promotion
 - financial incentives

REPORTS FROM THE CLIMATE CHANGE BREAKOUTS: MITIGATION

- areas for collaboration include:
 - ecological fiscal reform
 - outreach and education
 - common weights and measures in terms of consistency in information and in how it is collected
 - common infrastructure in terms of rail, "green" ports, etc.
- actions for the Pacific NorthWest Economic Region include:
 - identification of the economic, as well as other, benefits and opportunities associated with taking action on climate change
 - identification of emerging technologies

REPORTS FROM THE CLIMATE CHANGE BREAKOUTS: ADAPTATION

areas for collaboration include:

- in order to avoid duplication, there is a need to exchange information among geographic regions and areas of expertise
- harmonization of infrastructure and engineering standards
- real-world monitoring of information and the collection of data needed to make decisions
- incorporation of climate change discussions into Pacific NorthWest Economic Region working groups
- actions for the Pacific NorthWest Economic Region include:
 - education about the regional impacts of climate change
 - identification of the opportunities associated with climate change, such as a longer growing season
 - involving businesses and local communities because that is where the impacts are felt

REPORTS FROM THE CLIMATE CHANGE BREAKOUTS: TRANSPORTATION

- areas for collaboration include:
 - a best practices forum with an award
 - a community recognition program
 - education and outreach
 - congestion at the land border
 - "green" ports with similar environmental standards
 - wasting of fuel at airports
 - infrastructure analysis
 - a Pacific NorthWest Economic Region advocacy group focussed on funding
 - incentive programs to promote efficiency
 - innovative financing mechanisms
 - denser communities, or smart growth
 - regional transportation planning
- actions for the Pacific NorthWest Economic Region include:

- mapping of fuel use in the Pacific NorthWest Economic Region (PNWER) area
- laws to assist legislators
- exploration of the economic ramifications of different fuels
- PNWER assistance in networking
- broadening of the NORPASS concept
- verification of the amount of fuel wasted at airports in respect of idling aircraft, aircraft take-off and landing, etc.
- education and promotion
- financial incentives

WRAP-UP AND NEXT STEPS

Honourable Barry Penner, British Columbia Minister of Environment

- the Pacific NorthWest Economic Region is a tool for collaboration and the sharing of information
- a key question is: what can we do to minimize our risks?
- taking action to address climate change is risk management in the sense that action is being taken just in case the climate is changing in the way that scientists believe that it is
- if we pool our efforts, we will get results sooner

Dave Coutts, Member of the Alberta Legislative Assembly

- a key question in respect of addressing climate change is: how do you keep the economic/social/environmental balance?
- different things are happening in different regions for different reasons
- the Pacific NorthWest Economic Region should establish a separate working group for climate change
- each of us can –and should– be an advocate
- > there should be a focus on efficiencies, collaboration and coordination, education, the sharing of information, etc.

George Eskridge, Idaho House of Representatives

- there are mixed impressions among citizens regarding climate change, and this polarity is not helpful; not everyone believes that current developments are inconsistent with natural cycles, while others believe that humans are causing climate change
- different states and provinces have different approaches in respect of addressing climate change

- there are risks associated with overreacting to climate change, and an over-reliance on renewable energy sources should be avoided; for example, wind energy is volatile
- in respect of climate change, society should "proceed slowly with haste;" a serious look should be taken at serious issues, but one should proceed cautiously based on what makes sense using a common-sense approach
- the Pacific NorthWest Economic Region should facilitate discussion and should establish a climate change working group

Zack Hudgins, Washington State House of Representatives

- fighting about climate change is the wrong fight
- fighting about cheap electricity versus saving the environment is the wrong choice, since it is possible to do both
- we must plan for the future as an investment
- all options must be considered
- we must draw on great minds in order to apply things in new ways
- since climate change is a global issue, it is a bigger issue than all of us
- moving in the wrong direction is worse than not moving at all

Alan Olson, Montana House of Representatives

- climate cycles exist; consider, for example, the heat of the dust bowl and the assertion, 35 years ago, that the world was at the beginning of an ice age
- there should be a separate Pacific NorthWest Economic Region working group on climate change
- > emerging technologies should be explored
- in the Pacific Northwest, no one is polluting intentionally
- > since wind energy is unpredictable, it must be balanced with something else
- when considering actions to address climate change, the costs to businesses must be kept in mind
- > society should not jump to any hasty conclusions

Respectfully submitted,

Hon. Jerahmiel Grafstein, Senator Co-Chair, Canada-United States Inter-Parliamentary Group Rob Merrifield, M.P. Co-Chair, Canada-United States Inter-Parliamentary Group

Travel Costs

ASSOCIATION Canada-United States

Inter-Parliamentary Group

ACTIVITY Pacific NorthWest Economic Region

(PNWER) Economic Leadership Forum

DESTINATION Whistler, British Columbia, Canada

DATES November 15-17, 2007

DELEGATION

SENATE Hon. Wilfred Moore, Senator

HOUSE OF COMMONS Hon. Carol Skelton, P.C., M.P.

Guy André, M.P.

STAFF Émilie Thivierge

Executive Secretary

June Dewetering

Analyst

TRANSPORTATION \$1,902.78

ACCOMMODATION \$1,808.45

HOSPITALITY \$ Ø

PER DIEMS \$525.45

OFFICIAL GIFTS \$ Ø

MISCELLANEOUS/REGISTRATION \$2,020.18

FEES

TOTAL \$6,256.86