

Forest Sector Innovation in Canada

2015

The Compendium directly responds to a key priority expressed in the Canadian Council of Forest Ministers "A Vision for Canada's Forests: 2008 and Beyond", which noted that the development of a renewable bioeconomy presents interesting opportunities for the sector, and that information sharing is critical to achieving and communicating success. This Compendium strives to address both of the aforementioned points: providing a mechanism to communicate best practices for government support for industrial innovation across jurisdictions, and encouraging collaboration on joint initiatives. It was developed based on information submitted by participating jurisdictions. An attempt was made to include only active initiatives expected to feature significant forest industry participation or eligibility were included in order to provide a snapshot of the state of forest sector innovation in Canada. Document current as of Winter 2014/2015.

A Compendium by the Canadian Council of Forest Ministers



Name of Initiative	Type of Initiative	Description	Administering Organization(s)	Website
Investments in Forest Industry Transformation Program (IFIT)	Direct funding of activities	The Investments in Forest Industry Transformation (IFIT) program was created in 2010 to support Canada's forest sector in becoming more economically competitive and environmentally sustainable, using targeted investments in innovative technologies. The 2014 Federal Budget allocated \$90.4 million over 4 years starting in 2014-2015 to enable the continuation of the successful IFIT Program. Eligible recipients are companies that produce forest products and own at least one existing forest product manufacturing facility located in Canada. Projects must constitute a technology advancement, be located in Canada and involve products primarily derived from wood fibre.	Natural Resources Canada–Canadian Forest Service	http://www.nrcan.g c.ca/forests/federal- programs/13139
Forest Innovation Program (FIP)	Direct funding of activities Standards or regulations	The goal of the Forest Innovation Program (FIP) is to support pre-commercial and collaborative research, development and technology transfer activities to generate and advance high-value products and processes in the forest industry, including advancing the concept of biorefineries to provide new revenue streams for the sector, helping to position Canada as a global leader in several technology areas. The FIP will also support the development of national and international standards for cellulose nanomaterials to facilitate market adoption. The 2015 federal budget renewed the FIP with \$56 million over two years, starting in 2016-2017.	Natural Resources Canada–Canadian Forest Service	http://www.nrcan.g c.ca/forests/federal- programs/13137
Forest Research Institutes Initiative (FRII)	Direct funding of activities	The Forest Research Institutes Initiative (FRII) supports pre-competitive research in areas of public good such as codes and standards for lumber and building systems, and reducing the environmental footprint of forest operations through funding to FPInnovations.	Natural Resources Canada–Canadian Forest Service	http://www.nrcan.g c.ca/evaluation/rep orts/2010/840

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Expanding Market Opportunities Program (EMO)	Direct funding of activities	The Expanding Market Opportunities Program (EMO) has two components: an Offshore Markets component, the goal of which is to maintain and grow international forest product markets while promoting Canadian forest products as an environmentally responsible choice; and a North American component, the goal of which is to expand wood use in the North American non-residential and mid-rise construction market and position Canada as a world leader in sustainable forest management and a preferred source of sustainable forest products. Eligible recipients include not- for-profit forest products associations, manufactured housing associations, provinces, provincial Crown corporations, and not-for-profit organizations engaged in forest product research. The 2015 federal budget renewed the EMO program with \$30 million over two years, starting in 2016-2017.	Natural Resources Canada–Canadian Forest Service	https://www.nrcan. gc.ca/forests/federa l-programs/13133
Aboriginal Forestry Initiative (AFI)	Direct funding of activities Fostering collaboration	The Aboriginal Forestry Initiative (AFI) is a strategic and innovative approach to supporting forest-based economic development and entrepreneurship for Aboriginal peoples across Canada. NRCan leads the AFI in partnership with AANDC and 12 other federal departments/agencies to support the Government of Canada's Federal Framework for Aboriginal Economic Development. With an emphasis on creating and exchanging knowledge, the AFI focuses on supporting communities secure benefits through the themes of: biomass/bioenergy, value-added wood products, providing services to government/industry, and optimizing tenure opportunities. An "integrated natural resource development" approach influences programming by developing the understanding that forestry is one element among a larger suite of natural resource development activities and that opportunities exist beyond the traditional forest industry.	Natural Resources Canada–Canadian Forest Service Aboriginal Affairs and Northern Development Canada	https://www.nrcan. gc.ca/forests/federa l-programs/13125 http://www.aadnc- aandc.gc.ca/eng/13 30016561558/13300 16687171

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Memorandum of Understanding (MOU) between CanmetENERGY and FPInnovations	Fostering collaboration	CanmetENERGY in collaboration with Canadian Forest Service, FPInnovations and other partners, is investigating, evaluating and optimizing technology platforms for the integration of biorefinery processes into pulp and paper mills. Current activities are focused within three pillars, the efficiency assessment (both water and energy) and optimization of the existing mills, development and refinement of processes to produce new products from lignin, hemicelluloses and wood-based sugars, and the integration of new processes in existing mills including the analysis of any impact on facility performance and economics.	Natural Resources Canada–Canadian Forest Service, Natural Resources Canada– CanmetENERGY and FP Innovations	http://www.fpinno vations.ca/media/n ews- releases/Documents /2013/0205- fpinnovations-and- canmetenergy- announce-mou- collaborative- research-in- bioeconomy-to- help-transform- forest-sector.pdf
Bioeconomy Interdepartmental Working Group (BIWG)	Fostering collaboration	The Bioeconomy Interdepartmental Working Group (BIWG) brings together more than 15 federal departments and agencies with interests in the bioeconomy to improve coordination of activities in this space. The BIWG was initiated in 2013 by co-chairs Natural Resources Canada– Canadian Forest Service and Agriculture and Agri-Food Canada, with a long-term view to developing an integrated framework for federal government involvement in bioeconomy development. BIWG membership is open to federal government employees. The current area of focus for the BIWG is the refinement of bioeconomy metrics for improved tracking and monitoring of development in this sector.	Natural Resources Canada–Canadian Forest Service and Agriculture and Agri- Food Canada	n/a

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ecoEnergy Innovation Initiative (ecoEII)	Direct funding of activities	The ecoENERGY Innovation Initiative (ecoEII) was launched in 2011 as a key component of the Government of Canada's actions to achieve real emissions reductions, while maintaining Canada's economic advantage and its ability to create jobs for Canadians. The program supports energy technology innovation to produce and use energy in a cleaner and more efficient way. Its funding has been fully allocated to a suite of research and development (R&D) and demonstration projects.	Natural Resources Canada–Energy	http://www.nrcan.g c.ca/energy/funding /current-funding- programs/eii/4985
Program of Energy Research and Development (PERD)	Fostering collaboration	The Program of Energy Research and Development (PERD) is a federal, interdepartmental program operated by Natural Resources Canada. PERD funds research and development that is conducted by federal departments and agencies and that is designed to ensure a sustainable energy future for Canada in the best interests of both our economy and our environment. Thirteen federal departments participate in PERD to collaborate with the private sector, associations and other funding agencies, universities, provincial and municipal governments, research organizations and international organizations.	Natural Resources Canada–Energy	http://www.nrcan.g c.ca/energy/funding /current-funding- programs/perd/499 3
Canadian Biomass Innovation Network (CBIN)	Fostering collaboration Market development or market access	Canadian Biomass Innovation Network (CBIN) is a network of federal researchers, program managers, policy analysts, and expert advisors, together with partners from industry, academia, non-governmental organizations, the provinces, and the international community focused on the bioeconomy. The objectives of the network are to make strategic S&T investments, and provide technical input to policy in order to advance the development of the bioeconomy; to manage R&D and demonstrate funds that are focused on advancing bioenergy in the bioeconomy; and to hold annual national level meetings to share information.	Natural Resources Canada–Office of Energy Research and Development	<u>http://cbin.gc.ca/h</u> <u>ome</u>

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ecoENERGY for Aboriginal and Northern Communities Program	Direct funding of activities	This ecoENERGY for Aboriginal and Northern Communities program supports Aboriginal and northern communities, including off-grid communities, through direct funding in order to reduce greenhouse gas emissions through the integration of proven renewable energy technologies (such as bioenergy utilizing direct combustion of woody biomass). Projects that will integrate renewable energy into new or existing community buildings may receive up to \$100,000. Projects that will result in a reduction of greater than 4,000 tonnes of greenhouse gases over their life cycle may receive up to \$250,000 per project. The most recent Call for Proposals under this program closed on February 20, 2015.	Aboriginal Affairs and Northern Development Canada	http://www.aadnc- aandc.gc.ca/eng/11 00100034258/11001 00034259
Sustainable Development Technology Canada	Direct funding of activities Fostering collaboration Market development or market access	 SDTC has three different funds to support innovative, Canadian cleantech projects through development and demonstration. 1. The SD Tech FundTM supports projects that address climate change, air quality, clean water and clean soil. The Government of Canada has allocated a total of \$915 million for the fund. 2. The SD Natural Gas FundTM, an offshoot of the SD Tech Fund, supports the development and demonstration of new downstream natural gas technology. 3. The NextGen Biofuels FundTM (wind-down phase). SDTC also offers a range of support services to clients (e.g., Virtual Incubator for business plans, the Follow-on Financing for securing financing, Export Market Access Program for exporting). 	Sustainable Development Technology Canada	https://www.sdtc.ca /en
		Financing for securing financing, Export Market Access		

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Networks of Centres of Excellence (NCE)	Direct funding of activities	Funding issued through NCE programs is awarded on a competitive basis. The application and peer review process requires proposed networks and centres to demonstrate that	Networks of Centres of Excellence Canada – Joint Initiative of	<u>http://www.nce-</u> <u>rce.gc.ca/Index_eng</u> <u>.asp</u>
	Market development or market access	they can meet the highest standards of excellence. Competitions follow a multi-stage process that includes a comprehensive review conducted by top experts. They are	Canadian Granting Agencies (NSERC, SSHRC, and CIHR)	
	Fostering Collaboration	scheduled as funding becomes available, and are tailored to respond to Canada's current research and innovation needs, in keeping with the mandate of each program.		
		Networks previously funded under this program include: BioFuelNet, the Canadian Forest NanoProducts Network, the Green Aviation Research and Development Network, and the Bioindustrial Innovation Centre (BIC).		
Natural Sciences and Engineering Research Council of Canada (NSERC) Strategic Partnership Grants for Networks	Direct funding of activities	The Strategic Partnership Grants for Networks fund large- scale, multidisciplinary research projects in targeted research areas that require a network approach and that involve collaboration between academic researchers and Canadian- based organizations. The Grants have two application categories: one category for proposed networks that will investigate a new collection of research objectives that do not build on previous network-scale activities and that have never been funded federal or provincial network-scale granting programs, and a second category for proposed networks that <i>have</i> been previously funded by federal or provincial network-scale granting programs. The networks can request funding between \$500,000 to \$1 million per year for five years, for a maximum request of \$5 million. Application deadline is due April 1, 2015.	Natural Sciences and Engineering Research Council of Canada	http://www.nserc- crsng.gc.ca/professo rs-professeurs/RPP- PP/SNG- SRS_eng.asp

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AgriInnovation	Direct funding of activities	The AgriInnovation Program is a five-year, up to \$698 million initiative that is designed to accelerate the pace of innovation by supporting research and development activities in agri-innovations and facilitating the demonstration, commercialization and/or adoption of innovative products, technologies, processes, practices and services. The aim is to enhance economic growth, productivity, competitiveness, adaptability and sustainability of the Canadian agriculture, agri-food and agri-based products sector and assist in capturing opportunities for the sector in domestic and international markets.	Agriculture and Agri- Food Canada	http://www.agr.gc.c a/eng/?id=1354301 302625
Biomass Inventory Mapping and Analysis Tool (BIMAT)	Market development or market access	The Biomass Inventory Mapping and Analysis Tool (BIMAT) is a web-based geographic information systems (GIS) tool that currently allows users to evaluate the sustainable availability of Canadian agricultural, forestry, and sorted municipal residual biomass. Material searches for the sustainable amount of selected materials can be done within a given radius from a selected point on a map, or the extraction radius of selected materials can be determined for a specified tonnage.	Agriculture and Agri- Food Canada	<u>http://www.agr.gc.c</u> <u>a/atlas/bimat</u>
Industrial Bioproducts Value Chain Committee	Market development or market access	The Industrial Bioproducts Value Chain Committee is part of a series of Value Chain Roundtables (VCRTs) that were launched in various sectors in 2003 as part of a shared vision between industry and government to enhance Canadian competitiveness and profitability. The Industrial Bioproducts Value Chain Committee includes a Communications Working Group, a Catalyst Working Group, a Biomass Quality and Supply Working Group and a Regulations Working Group.	Agriculture and Agri- Food Canada	http://www5.agr.gc. ca/eng/industry- markets-and- trade/value-chain- roundtables/industri al- bioproducts/?id=13 85568234264

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Canada-United States Regulatory Cooperation Council	Standards or regulations Market development or market access	The Canada-United States Regulatory Cooperation Council (RCC) was created in 2011 to increase regulatory transparency and coordination between the two countries. The RCC has developed two action plans: (1) the Joint Action Plan launched in 2011 which focuses on 29 initiatives in agriculture and food, transportation, environment, and cross sectoral issues; and (2) the Joint Forward Action Plan launched in 2014 which builds on the Joint Action Plan while institutionalizing joint planning and collaboration between Canada and the US regulatory agencies.	Agriculture and Agri- Food Canada, Health Canada and Environment Canada	http://actionplan.gc .ca/en/content/reg ulatory-cooperation- council-0
Western Innovation (WINN) Initiative	Direct funding of activities	Western Innovation Initiative (WINN) is a \$100 million five-year federal initiative that offers repayable contributions for small- and medium-sized enterprises with operations in Western Canada to move their new and innovative technologies from the later stages of research and development to the marketplace. Up to \$3.5 million in repayable contributions will be made to small- and medium- sized businesses between 2013 and 2018.	Western Economic Diversification Canada	http://www.wd- deo.gc.ca/eng/1485 7.asp
Industrial Biomaterials Flagship Program	Fostering collaboration	The National Research Council Canada works with key collaborators from across the biomaterials supply chain to develop high quality, sustainable and cost-effective non- food biomass-based materials. Its leading-edge facilities and unique expertise strengthen the industry's competitive advantage in bio-sourced polymers and composites manufacturing, enabling businesses to create new products and new markets, in Canada and internationally. The Industrial Biomaterials Flagship program undertakes research and technology development activities to address technology challenges associating with converting biomass	National Research Council Canada	http://www.nrc- cnrc.gc.ca/eng/solu tions/collaborative/ industrial_bio_index .html

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		into manufactured products along the value chain. The National Research Council Canada collaborates with partners across the supply chain, from the forestry and agriculture sectors, plant growers, resin and industrial product developers, manufacturers and end users.		
National Research Council Canada - Concierge Service	Fostering collaboration	The Government of Canada's Concierge Service provides a single access point where small and medium-sized enterprises (SMEs) can find advice to help them innovate and accelerate their growth. Operated by the National Research Council of Canada's Industrial Research Assistance Program (NRC–IRAP) in collaboration with over 40 federal and provincial partners, the Service improves innovation and economic opportunities for SMEs by helping them navigate the available innovation resources and support programs.	National Research Council of Canada– Industrial Research Assistance Program	<u>https://concierge.p</u> ortal.gc.ca/
Industrial Research Assistance Program (IRAP) – Business Innovation Access Program	Direct funding of activities Market development or market access Fostering collaboration	IRAP representatives work with Canadian SMEs at all stages of the innovation process to build their innovation capacity, to help them understand technology issues and opportunities, and to provide linkages to the best expertise in Canada. The Business Innovation Access Program provides \$20 million in funding to small- and medium-sized enterprises to help them access business services or technical assistance at Canada's learning institutions and publicly-funded research organizations to bring bigger and better innovations to market faster between. The program runs from 2013 and 2016. Eligible recipients are	National Research Council Canada	<u>http://www.nrc-</u> <u>cnrc.gc.ca/eng/irap</u> /biap/index.html

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		incorporated, for-profit, small- or medium-sized enterprises in Canada; with 500 or fewer full-time equivalent employees; who have the objectives to grow and to generate profits through development and commercialization of innovative, technology-driven products and services.		
Industrial Research Assistance Program (IRAP) – Commercialize Bio- products Research and Development	Infrastructure investment	A framework and database of publically funded bio- products research and development is being initially populated under contract to the Industrial Research Assistance Program (IRAP). The program seeks to be self- sustaining as organizations self-populate with their own technology.	National Research Council	<u>http://www.nrc-</u> <u>cnrc.gc.ca/eng/irap</u> <u>/index.html</u>
Genome Canada	Market development or market access	Genome Canada aims to develop and apply genomic sciences that create economic wealth and social benefit for Canadians, by investing in and managing large-scale research and translating discoveries into commercial opportunities, new technologies, applications and solutions. Genome Canada builds bridges between government, academia and industry to forge a genomics-based public-private innovation focused on key science sectors. The project will have invested \$2.5 billion into research by 2016-17.	Genome Canada	<u>http://www.genom</u> <u>ecanada.ca/en/</u>

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Canada Foundation	Direct funding of	Created by the Government of Canada in 1997, the Canada	Canadian Foundation	http://www.innovat
for Innovation (CFI)	activities	Foundation for Innovation (CFI) strives to build our nation's capacity to undertake world-class research and	for Innovation	ion.ca/en
	Infrastructure	technology development. The CFI invests in state-of-the-art		
	investment	facilities and equipment, universities, colleges, research hospitals and non-profit research institutions in order to attract and retain the world's top talent, train future researchers, support private-sector innovation and create high-quality Canadian jobs. To date, the CFI has invested in twelve projects specifically related to forestry.		
Canada Research Chairs Program	Market development or market access	The Canada Research Chairs program stands at the centre of a national strategy to make Canada one of the world's top countries in research and development. Since 2000, the program invests \$265 million per year to attract and retain some of the world's most accomplished and promising minds. Chairholders aim to achieve research excellence in engineering and the natural sciences, health sciences, humanities, and social sciences.	Government of Canada	<u>http://www.chairs-</u> <u>chaires.gc.ca/home-</u> <u>accueil-eng.aspx</u>

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Alberta Bio Future	Direct funding of	Launched in March 2015, the Alberta Bio Future program	Alberta Innovates Bio	http://bio.albertain
Program	activities	aims to expand a competitive, sustainable and profitable	Solutions	novates.ca/
C		bioindustrial sector (materials, chemicals, and energy).		
	Partnered Research	Funding for Alberta companies will be provided in three		
		strategic priority areas: discovery & developmental		
		research, testing and commercialization, and equipment		

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		utilization. \$20 million in funding will be available through March 2019.		
Biorefining Conversions Network	Fostering Collaboration Partnered Research	Based out of the University of Alberta, the Biorefining Conversions Network (BCN) is an initiative working to support the provincial bioindustry by facilitating multi- disciplinary industry/academic collaborations structured towards achieving commercializable outcomes. The Network has a 6 year history with a focus of developing technologies to convert renewable biomass into conventional chemical products. Support from Alberta Innovates Bio Solutions has successfully enabled leveraging of \$12 million in industry activity. The Network includes researchers, industry partners, government and other	University of Alberta	<u>http://www.bcn.ual</u> <u>berta.ca/</u>
Cellulose Nano- crystal pilot plant	Direct funding of activities Standards or regulations Market development or market access Fostering collaboration	bioindustrial stakeholders. The Cellulose Nano-crystal pilot plant is a 100 kg per week pilot plant commissioned in Sept 2013 that produces CNC from Kraft and dissolving pulp for application development. The Government of Alberta, AlPac Forest Industries, Alberta Innovates – Bio Solutions, Alberta Innovates – Technology Futures and Western Economic Diversification have contributed \$10 million to the project since it began. The pilot plant aims to reduce production costs through technology and process improvement, assist in the derisking of technology and work with various partners in a variety of industry sectors to develop applications. The plant capitalizes on CNC's characteristics by offering either unique products or a competitive advantage.	Alberta Innovates - Technology Futures	http://www.albertat echfutures.ca/RDS upport/BioandIndu strialTechnologies/ BioresourceTechnol ogies.aspx
AITF Cellulose Nanocrystals' Challenge #1	Direct funding of activities Market development or market access	This program funds the development of CNC-based applications in a variety of sectors, ranging from energy to healthcare to advanced materials. Successful recipients received \$25,000 and up to 1 kg of CNC produced at AITF's pilot plant for their work.	NanoBridge & AITF	<u>http://www.nanobr</u> idge.ca/Programs/ <u>CNCChallenge/Fun</u> <u>dingProcess.aspx</u>

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	Fostering collaboration			
Lignin Development Program	Direct funding of activities	Alberta is embarking on a multi-party collaboration around the development of varied applications of lignin. The collaboration includes stakeholders across the value and	Various	
	Standards or regulations	supply chain, and is anchored by the production coming from West Fraser's (Hinton) commercial demonstration scale lignin facility.		
	Market development			
	or market access	The Hinton facility was funded in part through support from the federal Investments in Forest Industry		
	Fostering collaboration	Transformation program, and Alberta Innovates – Bio Solutions' Advanced Chemical and Material Program.		
Climate Change	Standards or	Alberta was the first province in Canada to develop	Alberta Environment	http://esrd.alberta.c
Strategy, Alberta Emissions Offset	Regulations	legislation regulating greenhouse gas emissions that require actions to make mandatory reductions for large industrial	and Parks	<u>a</u>
Market	Direct Funding of	emitters.		
	activities	One compliance option for emitters is payment on a per tonne basis to the Climate Change and Emissions	Climate Change and Emissions	http://ccemc.ca/
	Market development	Management (CCEMC) Fund. CCEMC funds support	Management	
	or market access	initiatives that reduce greenhouse gas emissions or improve Alberta's ability to adapt to climate change.	Corporation (CCEMC)	
		Offset credits or Emissions Performance Credits can be	Alberta Carbon	http://www.csaregi
		generated for sale/trade by companies who reduce	Registries	stries.ca/albertacarb
		greenhouse gas emissions beyond requirements or business as usual.	U	<u>onregistries/home.c</u> <u>fm</u>
Renewable Fuels Standard	Standards or Regulations	In April 2011, as part of Alberta Energy's Bioenergy Initiatives, Alberta implemented Renewable Fuel Standards requiring 2% renewable diesel in diesel fuel and 5%	Alberta Energy	http://www.energy. alberta.ca/BioEnerg y/1516.asp
Development of LiDAR-derived Decision Support Tools	Direct funding of activities	renewable alcohol in gasoline sold in Alberta. Current LiDAR inventory spans some 24 million hectares of the province's forested area and continues to grow in scope each year. Alberta has also been active in investigating the utility of LiDAR to provide innovative	Alberta Agriculture and Forestry	<u>n/a</u>

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		planning solutions that are economic, timely and ensure positive environmental outcomes. Significant efforts are underway to explore how wet areas mapping can inform complementary research in areas such as access management, silviculture, growth and yield, biodiversity, reclamation, recreational trail and road routing and emergency spill management. This research is being lead principally by the University of Alberta with current cash investments of approximately \$400,000 over 3 years.		
The Ecosystem Management Emulating Natural Disturbance Study (EMEND)	Direct funding of activities	The Ecosystem Management Emulating Natural Disturbance (EMEND) Project is a large-scale variable retention harvest experiment designed to test effects of residual forest structure on ecosystem integrity and forest regeneration at the forest stand-level. It seeks to determine how practical forest harvest and regenerative practices can best maintain biotic communities, spatial patterns of forest structure, and functional ecosystem integrity in comparison with mixed-wood landscapes that have originated through wildfire and other inherent natural disturbances. EMEND is a long-term project that began in 1998 and is forecast to run for one stand rotation, or approximately 80-100 years. The project, centered at the University of Alberta, is a collaboration between numerous research agencies, provincial and federal governments, and the forest companies operating in northwest Alberta. Investment in this project is approximately\$150,000 per year.	Alberta Agriculture and Forestry	http://www.emend project.org/
Southern Rockies Watershed Study	Direct funding of activities	The Southern Rockies Watershed Study began in 2004 to study the impacts of the 2003 Lost Creek wildfire in southern Alberta on watershed values. The project represents a partnership among researchers from several Canadian universities, the Government of Alberta, the United States Forest Service, the Centre for Hydrology and Ecology in the United Kingdom,. Over the past nine years watershed effects of natural disturbance (such as wildfire	Alberta Agriculture and Forestry	<u>http://www.srwp.u</u> <u>alberta.ca/</u>

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		and mountain pine beetle) and post-disturbance salvage have been monitored. During the second phase of the study the response of the watershed values during forest regeneration as well as watershed response to various forest management prescriptions will be studied. The total investment to date includes \$1,500,000 (cash and in-kind) from the Government of Alberta and \$400,000 from the Government of Canada.		
Marmot Creek Watershed Study	Direct funding of activities	This world class study consists of watershed monitoring infrastructure which includes 10 hydrometeorological stations and 4 stream gauging stations to measure flow from alpine, clear-cut, thinned, small clearing and natural forest sub-watersheds in the Marmot Creek watershed of the Eastern Rockies physiographic region of Alberta. The project started as part of a network of watershed studies across Canada (Improved Processes for Parameterization and Prediction in Cold Regions Network) and is being led by University of Saskatchewan. It is now part of the Changing Cold Regions Research Network funded by the Federal Government of Canada. Total funding of the project to date includes \$600,000 of cash and in-kind contribution from the Government of Alberta, and \$5 million over five years from the Government of Canada.	Alberta Agriculture and Forestry	

Atlantic Canada

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Atlantic	Direct funding of	Atlantic WoodWORKS! is a regional program of the	Maritime Lumber	http://atlanticwood
WoodWORKS!	activities	Maritime Lumber Bureau, as part of the national industry-	Bureau	works.ca
Program		led initiative of the Canadian Wood Council, with a goal to		
-	Market development	support innovation and provide leadership on the use of		
	or market access	wood and wood products. This program will support		

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	Fostering collaboration	various initiatives to develop new export markets for Atlantic Canadian wood products and will promote and expand wood product use in the Atlantic region, particularly commercially. The initiative is multi-year funded with contributions from other Atlantic jurisdictions.		

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Bio-Economy Initiative	Direct funding of activities	This initiative identifies and demonstrates opportunities to lower barriers to investment, reduce investment risk, and increase the successful adoption of bio-products and services supporting FPI. Some of the projects underway include new bio-products at forest products facilities, assessment of bio-economy infrastructure gaps, transferring BC communities to the bio-economy, and BC bio-products regional best bets. Funding for this initiative is \$1.115 million.	Ministry of Technology, Innovation and Citizens' Services FP Innovations (FPI)	http://www.fpinno vations.ca/Pages/h ome.aspx
Research Program (Ministry of Forests, Lands and Natural Resource Operations of British Columbia)	Base Ministry funding	This research program is focused on operationally relevant projects within a research framework that lays the foundation for moving toward a more integrated outcome- based approach to research. Research is focused on: <i>Ecosystem Stewardship</i> – Improved Ecological Knowledge for Sustainable Resource Stewardship <i>Ecosystem Health and Disturbance</i> - Improved Ecosystem Health and Reduced Risk From Landscape-Level Disturbance <i>Water</i> - Reduced Hydrogeologic Risk to Infrastructure, Communities and Natural Resource Values and Uninterrupted Water Quality, Quantity and Timing <i>Species and Habitat</i> - Improved Terrestrial and Aquatic	Ministry of Forests, Lands and Natural Resource Operations	n/a

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		Species Conservation and Management		
		Timber Supply - increased Volume and Value of Timber		
		Funding for this research is approximately \$3.5 million.		
BC Bio Economy Transformation Council	Fostering collaboration	Composed of industry, government, research and development institutions, the Council was formed to take a lead role in facilitating and accelerating the development of British Columbia's bio-economy. Efforts have concentrated on integrated and sustainable forest management to support optimal value (economic and ecological) and maximum utilization of fibre (including district pilots underway focussed on fibre use and availability). Additionally, efforts are underway to coordinate research and innovation to support demonstration and commercialization of bio-products that generate additional revenue and maximize total value of fibre.	Bio Economy Transformation Council	n/a
Forest Innovation Investment (FII)	Direct funding of activities	 Forestry Innovation Investments (FII), a provincial Crown corporation, has a mandate to ensure that British Columbia is recognized by the Province's key customers as a preferred global supplier. FII has a comprehensive online resource that provides information on how British Columbia is a leading supplier of high-quality, environmentally responsible forest products. FII encourages the transfer of wood construction expertise available from British Columbia. This combination of technology, expertise and products are a competitive advantage for British Columbia in developing new export markets. Funding for this initiative is \$17.3 million for 2014-15. 	Ministry of International Trade	<u>http://www.bcfii.ca</u> ∠
Climate Change Strategy	Base Ministry funding	The Ministry Forests, Lands and Natural Resource Operations of British Columbia's goals over the next four	Ministry of Forests, Lands and Natural	n/a

Name of Initiative	Type of Initiative	Description	Administering Organization(s)	Website
		 years for effectively responding to the impacts of climate change are to: 1. Integrate climate change into the Ministry's core business 2. Inform the identification of the Ministry's environmental and social priorities for climate change action through climate-relevant science, data gathering, and knowledge guides. 3. Ensure climate change action is undertaken through collaboration, partnerships, communication and outreach with BC's First Nations, communities and natural resource sector. 	Resource Operations	
Coastal Hem-Fir Initiative	Direct funding of activities	 This initiative's objective is to enhance the competitiveness of the BC coastal industry by increasing the value of the coastal hemlock and amabilis fir (hem-fir) resource. The government supports this initiative by working in partnership with FPInnovations. The initiative seeks to identify products suited to the coastal hem-fir resource that provide a competitive advantage over other wood species and alternative products, and to demonstrate improved value proposition from matching current and new products to the fibre resource. The goal is to achieve \$70 million dollars in annual, implemented benefit expressed in the increased value of the hem-fir resource. Funding for this initiative is \$1.4 million. 	Ministry of Forests, Lands and Natural Resource Operations FPInnovations	http://www.bccoas <u>talinitiative.ca/Imag</u> <u>es/Bulletins/Bullet</u> <u>n 2010-02.pdf</u>

Name of Initiative	Type of Initiative	Description	Administering Organization(s)	Website
Wood Innovation Design Centre (WIDC)	Direct funding of activities	The Wood Innovation Design Centre (WIDC) was completed in Prince George in 2014, and will serve as a centre of excellence for wood innovation, education,	Ministry of Jobs, Tourism and Skills Development	http://www.jtst.gov .bc.ca/woodinnovat ion/
	Infrastructure investment	research, and product development with programming focused on advancing British Columbia's expertise in wood-related products, and highlighting new and		http://www.unbc.c a/engineering/woo
	Fostering collaboration	innovative wood building products and techniques. The WIDC is expected to showcase British Columbia's expertise and global reputation as a leader in wood construction and design and engineered wood products. The Government of British Columbia is supporting two new masters programs in wood-related engineering to be offered by the University of Northern British Columbia at the Wood Innovation Design Centre, and is also working toward the establishment of a Tall Wood Building Construction chair.		<u>d-innovation-and-</u> <u>design-centre</u>
Wood First	Direct funding of activities	The Wood First Initiative aims to build on British Columbia's world reputation as the most sustainable and globally competitive forest sector by encouraging a cultural	Ministry of Jobs, Tourism, and Skills Training	http://www.jtst.gov .bc.ca/woodfirst/
	Standards or regulations	shift towards viewing wood as the first choice for construction, interior design and daily living. To support this goal, government passed the Wood First Act and	Forest Innovation Investment	<u>http://www.bcfii.ca</u> <u>/bc-forest-</u> <u>sector/wood-first/</u>
	Fostering collaboration	funds four organizations (B.C. Wood, FP Innovations, B.C. Wood Works, and the Centre for Advanced Wood Processing at UBC) to lead Wood First initiatives. The Act requires wood to be considered as the primary building material in all new publicly-funded buildings, in a manner consistent with the British Columbia Building Code.		
First Nations Forest Sector Technical Support Program	Direct funding of activities	This program targets the development of new and existing forest related businesses for First Nations within British Columbia. The government supports this initiative by working in partnership with FPInnovations.	Ministry of Forests, Lands and Natural Resource Operations	<u>http://www.fpinno</u> <u>vations.ca/Pages/h</u> <u>ome.aspx</u>

Name of Initiative	Type of Initiative	Description	Administering Organization(s)	Website
		Objectives of the program include providing technical advice to First Nation businesses, identifying opportunities within the current First Nation business environment and provide knowledge for cluster development, providing First Nations with tools to help develop forest resources under community control, encouraging business development, employment, and promotion of communities as a place to invest, and undertaking research and knowledge transfer to support the desired direction for economic development under FN control. Funding for this program is \$400,000.	FPInnovations	
Forest Sector Genomics	Direct funding of activities	In 2010, researchers funded by Genome British Columbia were awarded \$46 million in funding from Genome Canada for forestry related projects linked to the Forest Health document, which was generated by the Genome Enterprise in consultation with forest sector stakeholders in academia, government and industry. These investments are tackling key social-economic challenges in the sector, including pest detection, developing trees that grow faster producing more fibre, selecting seeds that will stand up to the environmental stresses that will result from climate change and developing downstream, value-added uses for fibre. Further research beyond 2015 is anticipated, dependent on securing further funding through another competitive process with Genome Canada.	Ministry of Health Genome BC	http://www.genom ebc.ca/index.php?cI D=84
Tree Improvement and Seed Selection	Base Ministry funding	The Ministry of Forests, Lands, and Resource Operations of British Columbia developed the Tree Improvement and Seed Selection program to increase the resilience of future forests in response to the changing environment regarding identifying tree species and populations better adapted to future climates. Through this program, British Columbia collaborates with universities on impacts and adaption to climate change, identifies pest resistant genes in Spruce,	Ministry of Forests, Lands and Natural Resource Operations	n/a

Name of Initiative	Type of Initiative	Description	Administering Organization(s)	Website
		and identifies challenges with pine seed production in interior orchards. Funding for this program is \$10 million.		
Cellulose Filament Research	Fostering collaboration	Cellulose filaments have the potential to radically transform Canada's forest sector by revolutionizing the properties of pulp and associated products. Through the Cellulose Filament Research initiative, British Columbia is working with the forest industry to develop the cellulose filament research opportunity in the province. The British Columbia component of funding for this project is \$2.25M over years.	Ministry of Forests, Lands and Natural Resource Operations	n/a
British Columbia Bio-Energy Network (BCBN)	Direct funding of activities	The British Columbia Bio-Energy Network (BCBN) is an industry-led initiative that helps deploy near-term bioenergy technologies and supports research that aims to build a world-class bioenergy capability in British Columbia. BCBN's mandate is to maximize the value of BC's biomass resources, develop research and demonstration projects, reduce greenhouse gas emissions. network and partner to advance BC's bioenergy sector, and champion funding initiatives to support bioenergy. British Columbia provided \$25 million in funding to BCBN in 2008.	Ministry of Energy and Mines British Columbia Bio- Energy Network	<u>http://bcbioenergy</u> <u>ca/</u>
Forest Carbon Partnership Program (FCPP)	Market development or market access Fostering collaboration	Forest Carbon Partnership Program (FCPP) supports carbon-funded opportunities on Crown Forest Land and leverages private sector investments to restore damaged public forest land in exchange for the carbon offsets the planted trees are able to generate. The FCPP focusses on reforestation of naturally disturbed (i.e. insect and wildfire damaged) crown forest that would not otherwise be reforested.	Ministry of Forests, Lands and Natural Resource Operations	www.gov.bc.ca/for

Manitoba

Name of Initiative	Type of Initiative	Description	Administering Organization(s)	Website
Manitoba Hydro - Power Smart Bioenergy Optimization Program	Direct funding of activities Incentives Infrastructure investment Market development or market access	Manitoba Hydro's Bioenergy Optimization Program provided support and technology transfer to raise the profile of bioenergy technologies. Manitoba Hydro has collaborated with many forest partners on this initiative, including Tolko Industries with the Pyrolysis Oil Demonstration Project, Pineland Forest Nursery with the Synthetic Gas Demonstration Project, and Heating Spruce Products Ltd with the Waste Heat Demonstration Project. Funding for this program is \$6 million.		http://hydro.mb.ca /your_business/bio energy_optimizatio n/index.shtml http://hydro.mb.ca /your_business/bio energy_optimizatio n/demonstrations.s html
Commodity Pricing: Bioproducts and Residual Biomass	Fostering collaborationDirect funding of activitiesStandards or regulationsMarket development or market access	Established commodity pricing for bioproducts and residual biomass will enable forest harvesting for use in bioenergy products/ consumption.	Conservation and Water Stewardship - Forestry and Peatlands Management	http://www.gov.m b.ca/conservation/f orestry/timber- admin/current.html http://web2.gov.m b.ca/laws/regs/pdf /f150-227.88r.pdf
Government of Manitoba: Wood Biomass for Heating and Energy Feasibility Study 2009	Direct funding of activities Market development or market access	The Province of Manitoba is accelerating plans to produce heat and power from agriculture and forestry byproducts. The Province is providing \$150,000 in funding for a feasibility study on the use of wood biomass for heat and energy production. Findings of the report are currently being used to assist Manitoba in making decisions about new proposals for biomass development.	Conservation and Water Stewardship - Forestry and Peatlands Management	n/a

New Brunswick

Name of Initiative	Type of Initiative	Description	Administering Organization(s)	Website
Early Intervention Strategy to Supress A Spruce Budworm Outbreak	Collaborative Research	As evidence mounts that Eastern North America is on the cusp of another Spruce Budworm (SBW) outbreak Jurisdictions must weigh control options. An option not previously tested is early intervention to suppress SBW populations and prevent widespread damage. In New Brunswick, Government and Industry have positioned themselves to explore and apply early intervention strategies. These strategies would include short-term (applied control measures design to suppress populations), longer-term (inoculating seedlings with entophytic fungi which have insect suppressing qualities), and improving decision support capabilities to facilitate planning.	Atlantic Innovation Fund with Forest Protection Limited as lead	<u>http://healthyforest</u> partnership.ca

Newfoundland and Labrador

Name of Initiative	Type of Initiative	Description	Administering Organization(s)	Website
Centre for Forest	Direct funding of	Established in 2011, the Centre for Forest and Science	Newfoundland and	http://www.nr.gov.
Science and	activities	Innovation (CFSI) is a dedicated research division of the	Labrador Department	<u>nl.ca/NR/departme</u>
Innovation (CFSI)		Forest Services Branch within the Newfoundland and	of Natural Resources	nt/branches/forestr
	Fostering collaboration	Labrador Department of Natural Resources. It functions as		<u>y/forest science in</u>
		a catalyst for the evolution of forest management and		novation.html
		industry in Newfoundland and Labrador. Through the		
		development of a collaborative research program, the		
		centre strives to provide the knowledge and tools required		
		for forest management in an increasingly challenging		
		environment. Its objectives are to create cohesion among		
		forest researchers, to bring forest researchers and forest		
		managers together to improve application of research		
		outputs, and to build forest research capacity in the		
		province. The CFSI supports and administers research		

Newfoundland and Labrador

Name of Initiative	Type of Initiative	Description	Administering Organization(s)	Website
		through the Forest Research and Innovation Fund.		
BioFuels Project	Direct funding of activities Fostering collaboration	This BioFuels Project is a part of the Atlantic Innovation Fund (AIF) initiative entitled "Advanced fibre measurement technologies for forest industry competitive advantage". Key contributors to this initiative are Corner Brook Pulp and Paper Ltd, the Paprican Division of FP	Memorial University	n/a
	Partnered research	Innovations, the Newfoundland and Labrador Department of Natural Resources and Limerick Pulp and Paper Centre. The main goal of the AIF initiative is to maintain and increase the competitiveness of Newfoundland and Labrador's forest industry.		
Adapting BioPathways Newfoundland and	Direct funding of activities	The Adapting BioPathways Newfoundland and Labrador Initiative examines the provincial forest resource and technology options to understand the robustness of the	Centre for Forest Science and Innovation	n/a
Labrador	Market development or market access	technologies in different market conditions. Newfoundland and Labrador has partnered with FPInnovations on this on-going research initiative in order to use research to		
	Fostering collaboration Partnered research	explore policy options in relation to forestry.		
Unmanned Aerial Vehicle Mapping	Direct funding of activities	The on-going Unmanned Aerial Vehicle Mapping project explores the utility of high resolution unmanned aerial vehicle (UAV) orthophotography and elevation data for	Centre for Forest Science and Innovation	n/a
	Market development or market access	forestry applications.		
	Fostering collaboration			
	Research			
Newfoundland and Labrador Biorefinery Strategy	Direct funding of activities	The on-going Newfoundland and Labrador Biorefiniery Strategy aims to define promising biorefinery product- process options unique to the province.	Centre for Forest Science and Innovation	n/a
01	Standards or			

Newfoundland and Labrador

Name of Initiative	Type of Initiative	Description	Administering Organization(s)	Website
	regulations Market development or market access			
	Collaborative research			
Modeling and mapping forest structure and related fibre attributes	Collaborative research	The Wood Fibre project was designed to increase the competitiveness of the Newfoundland and Labrador forest industry by making better use of wood and fibre resources. Specifically, this project advanced new inventory tools and methods for modeling and mapping forest structure and related fibre attributes. This research initiative successfully mapped structure and fibre attributes at the tree, stand and landscape levels with a view to integrating local and regional scale map products within the forest management inventory to support decisions regarding optimal use of the fibre resource in Newfoundland and Labrador.	Canadian Forest Service, Natural Resources Canada (Canadian Wood Fibre Centre), Grenfell Campus of Memorial University, Canadian Wood Fibre Centre, Newfoundland and Labrador Department of Natural Resources (Forest Services Branch), Corner Brook Pulp and Paper Limited (CBPPL), FPInnovations, and the University of Sherbrooke.	http://cfs.nrcan.gc ca/publications?id= 35313

Northwest Territories

Name of Initiative	Type of Initiative	Description	Administering Organization(s)	Website
Fort Providence	Direct funding of	The Fort Providence Forest Management Agreement will	The Northwest	
Forest Management	activities	supply wood to a wood pellet plant over a 25 year period	Territories	
Agreement		with 5 years of support, which will help to develop	Department of	
	Fostering collaboration	employment and community capacity in forest business,	Environment and	

Northwest Territories

Name of Initiative	Type of Initiative	Description	Administering Organization(s)	Website
		harvesting and related activities. The initiative will foster a stable Aboriginal Forest Corporation that is formed of First Nations and Métis Councils.	Natural Resources	
Fort Resolution Forest Management Agreement	Direct funding of activities	The Fort Resolution Forest Management Agreement will supply wood to a wood pellet plant over a 25 year period with 5 years of support, which will help to develop	The Northwest Territories Department of	
2	Fostering collaboration	employment and community capacity in forest business, harvesting and related activities. The initiative will foster a stable Aboriginal Forest Corporation that is formed of First Nations and Métis Councils.	Environment and Natural Resources	

Nova Scotia

Name of Initiative	Type of Initiative	Description	Administering Organization(s)	Website
Forest Sector	Direct funding of	Nova Scotia's Forest Sector Innovation initiative provides	Nova Scotia	www.novascotia.ca/
Innovation	activities	over \$1 million per year to the forest sector in non-	Department of Natural	<u>natr</u>
		repayable, cost-shared contributions to build	Resources	
	Market development	competitiveness through innovation, increase productivity		
	or market access	within the forest industry sector, and promote the		
	~	development of new products and processes to enhance		
	Fostering collaboration	sustainable forest management practices. Any organization		
	D 1 11 '	or activity that is a part of the forest industry value chain is		
	Research and design	eligible to receive funding under this initiative.		
	Skills development			
InnovaCorp	Direct funding of	The InnovaCorp Demonstration Centre is a repurposed	InnovaCorp and Nova	<u>www.innovacorp.ca</u>
Demonstration	activities	newsprint mill site in Liverpool, Nova Scotia that is	Scotia Department of	
Centre		dedicated to supporting biomaterials and bioenergy, clean	Economic and Rural	
	Infrastructure	tech applied research and design, and commercial	Development and	
(Biomaterials/	investment	development of innovative technology opportunities. The	Tourism	
Bioenergy)		facility promotes industry and research and design		
	Fostering collaboration	institution collaboration while allowing the testing of		

Nova Scotia

Name of Initiative	Type of Initiative	Description	Administering Organization(s)	Website
	Research and design	technology processes and scaled demonstration/incubation initiatives. The Demonstration Centre is a component of a larger commercial park providing common services, steam/heat, tidewater wharf and land/infrastructure capability for light manufacturing.		
Productivity Investment Program	Incentives	General initiative- not forest industry specific.	Nova Scotia Economic and Rural	http://www.novasc otia.ca/econ/pip/
(Capital Investment, Workplace Innovation and Productivity Skills Incentive)	Infrastructure investment Skills Development	The Productivity Investment Program encourages industry to become more innovative and globally competitive by providing capital investment incentives of 20% up to \$1M to technologically-advanced machinery promoting clean technology. The program gives preference to exporting firms, while the workplace innovation and productivity incentive encourages investment in skills development and training. This cost-shared initiatives covers up to 50% of eligible costs, with a maximum \$10,000 for each proponent.	Development and Tourism	
Market Development/	Incentives	General initiative- not forest industry specific.	Nova Scotia Economic and Rural	<u>www.novascotia.ca/</u> econ
Diversification (Exportability, Go- Ahead, Global Business Accelerator, Exporter Prospector)	Market development	The Market Development/ Diversification initiative helps companies to develop new international markets. The program is a cost-shared suite of initiatives that work to assess new market potential, retain in-market expertise and develop market plans.	Development and Tourism Nova Scotia Business Inc.	www.novascotiabus iness.com
Community Feed-In Tariff (COMFIT) (Biomass – CHP)	Incentives Standards or regulations	General initiative not forest industry specific. The Community Feed-in-Tariff remote investment in community based renewable energy combined heat and power (CHP) projects. Program establishes a guaranteed feed in price (tariff) for electricity generated from renewable sources including low grade residual forestry fibre and/or agricultural biomass.	Nova Scotia Department of Energy and Department of Natural Resources	http://energy.novas cotia.ca/renewables /programs-and- projects/comfit
Atlantic Forest	Direct funding of	The Atlantic Forest Sector Innovation Initiative is an	Atlantic provincial	www.gov.ns.ca/nat

Nova Scot	ia
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Name of Initiative	Type of Initiative	Description	Administering Organization(s)	Website
Sector Innovation Initiative (proposed new collaborative	activities Market development or market access	investment in forest sector innovation and competitiveness from 2014-17. The initiative identifies innovation and policy issues and priorities that are shared between Atlantic provinces to coordinate new investment and technology development, promoting partnerships between knowledge	jurisdictions in partnership with Federal agencies	
initiative)	Fostering collaboration	providers and industry and regional jurisdictions.		
Productivity and Innovation Voucher Program	Incentives Fostering collaboration	General Initiative not forest industry specific. The Productivity and Innovation Voucher program promotes productivity and innovation in small- and medium-sized enterprises by providing a credit note (voucher) in two tiers of \$15,000 and \$25,000. These credit notes can be used at Nova Scotia universities and colleges to support industry technical and engineering problem- solving as well as the development of new products and services.	Nova Scotia Economic and Rural Development and Tourism	http://www.novasc otia.ca/econ/pnivo uchers/
Nova Scotia Business Development Program	Incentives	General initiative not forest industry specific. The Nova Scotia Business Development Program supports the creation and expansion of small businesses. The program provides funding and support of up to 50% at a maximum of \$15,000 through qualified consultants. It also offers rebates to businesses for eligible activities.	Nova Scotia Economic and Rural Development and Tourism	<u>www.gov.ns.ca/eco</u> <u>n/nsbdp</u>
Strategic Cooperation Education Incentive (SCIE)	Incentives Skills development	General initiative not forest industry specific. The Strategic Cooperation Education Incentive supports employment of co-op students in approved positions through a per-hour wage incentive. Through this initiative, employers apply for incentives to provide co-op terms to students in science, business and engineering co-op programs.	Nova Scotia Economic and Rural Development and Tourism	<u>www.gov.ns.ca/eco</u> <u>n/sep/scei</u>

Nova Scotia

Name of Initiative	Type of Initiative	Description	Administering Organization(s)	Website
Small Business Loan Guarantee Programs	Loan guarantee	 General initiative not forest industry specific. The Small Business Loan Guarantee Program would provide: 75% guarantees for loans up to \$500,000 90% guarantees for businesses in high risk sectors 90% guarantees through the Immigrant Small Business Loan Program 	Nova Scotia Credit Unions	<u>www.ns-credit-</u> <u>unions.com</u>
Payroll rebate	Incentive	General initiative not forest industry specific. Nova Scotia Business Inc.'s payroll rebate is a performance-based incentive offered to eligible companies expanding in or relocating to Nova Scotia. The rebate is a return on eligible gross payroll that is generally paid out annually over a term not exceeding five years. To receive the rebate, a company must create or retain a targeted number of jobs, at a minimum determined salary, within a set timeframe. The rebate covers up to 8% of a company's annual salaries.	Nova Scotia Business Inc.	http://www.novasc otiabusiness.com/e n/home/businessfi nancing/payrollreba te.aspx
Nova Scotia Start Program	Incentive Skills development	General initiative not forest industry specific. The Nova Scotia Start Program is designed to help small- and medium-sized enterprises find qualified workers in Nova Scotia. The program will provide employers with financial incentives of up to \$25,000 per employee depending on the type of employment offered and the skill level required. In some cases, the program will provide retention bonuses.	Labour and Advanced Workforce Development	http://www.gov.ns. ca/employmentnov ascotia/programs/s tart.asp

Nova Scotia

	Description	Administering	Website
		Organization(s)	
centive	General initiative not forest industry specific.	Labour and Advanced	http://www.canada
		Workforce	business.ca/eng/pr
ills development	Nova Scotia trade experts (certified journeypersons) who	Development	<u>ogram/2578/</u>
, î	hire apprentices and provide them with further training are		
	eligible for the Apprenticeship Job Creation Tax Credit for		
	up to 10% of the apprentice's salary to a maximum of		
	\$2000 per year per apprentice.		
	lls development	Ils development Nova Scotia trade experts (certified journeypersons) who hire apprentices and provide them with further training are eligible for the Apprenticeship Job Creation Tax Credit for up to 10% of the apprentice's salary to a maximum of	centiveGeneral initiative not forest industry specific.Labour and Advanced WorkforceIls developmentNova Scotia trade experts (certified journeypersons) who hire apprentices and provide them with further training are eligible for the Apprenticeship Job Creation Tax Credit for up to 10% of the apprentice's salary to a maximum ofLabour and Advanced Workforce

Ontario				
Name of Initiative	Type of Initiative	Description	Administering	Website
	-		Organization(s)	
Ontario Wood Promotion Program (OWPP)	Direct funding of activities	 The Ontario Wood Promotions Program (OWPP) seeks to work with partners across Ontario to develop a strong culture of wood use that aims to help grow Ontario's industry. Among other programs, the OWPP has fostered innovation in the Canadian Wood Council through the Ontario WoodWORKS! program, providing capital assistance for post-secondary institutions. It has supported research and development efforts at FPInnovations as well as the Ontario Wood Manufacturing Council. The OWPP annual allocation is \$1 million and is open to primary and secondary wood product associations; strategic alliances between individuals, businesses, municipalities, and community organizations; not-for-profit organizations engaged in the forest or wood products industries; and educational institutions related to the primary and secondary wood products manufacturing 	Organization(s) Ontario Ministry of Natural Resources	http://www.mnr.go v.on.ca/en/Busines s/Forests/2Column SubPage/STDPRO D 091526.html
		industries, including trades, architecture and engineering programs.		

Ontario

Name of Initiative	Type of Initiative	Description	Administering Organization(s)	Website
Innovation and Demonstration Fund (IDF)	Direct funding of activities	The Innovation and Demonstration Fund (IDF) is a discretionary, non-entitlement funding program that focuses on the commercialization and initial technical demonstration of globally competitive, innovative green technologies, processes and/or products (environmental, alternative energy, bioproducts, hydrogen, and others). The fund's objective is to help companies in their efforts to commercialize innovative technologies in Ontario by mitigating the risk of projects with significant pilot-scale technical hurdles, with funding of up to 50% of eligible costs, and between \$100,000 and \$4 million, per project. The IDF is not aimed at routine engineering, upgrading, or improvements to existing processes, designs or products.	Ontario Ministry of Research and Innovation	http://www.ontario .ca/business-and- economy/innovatio n-demonstration- fund-program- guidelines
The Centre for Research and Innovation in the Bio-Economy (CRIBE)	Direct funding of activities	The Centre for Research and Innovation in the Bio- Economy (CRIBE) is a new provincial initiative to transform the forest products industry in Northern Ontario. As an independent, not-for-profit research corporation, CRIBE partners closely with other relevant organizations to transform research and business opportunities into operational realities. CRIBE will invest up to \$25 million to play a central role in the metamorphosis of Northern Ontario's future - creating jobs, opportunity and prosperity.	Centre for Research and Innovation in the Bio-Economy (CRIBE)	http://www.cribe.c <u>a</u>
Ontario Innovation Tax Credit (OITC)	Incentives	The Ontario Innovation Tax Credit (OITC) is a 10% refundable tax credit available to small- and medium-sized corporations performing eligible Scientific Research and Experimental Development. The maximum annual credit is \$300,000.	Ontario Ministry of Finance	http://www.fin.gov .on.ca/en/credit/oi tc/index.html
Northern Ontario Heritage Fund	Direct funding of activities	The Northern Ontario Heritage Fund develops programs that are designed to help build a stronger, more diverse economy in Northern Ontario. Programs include the Opportunity Assessment Projects, Applied Research & Technology Development Projects and Pilot Demonstration & Commercialization Projects, all of which	Ministry of Northern Development	http://nohfc.ca/en http://nohfc.ca/en /programs/norther n-innovation- program-

Ontario

Name of Initiative	Type of Initiative	Description	Administering Organization(s)	Website
		support the development and commercialization of new technologies by fostering collaboration and partnerships among the private sector, academic institutions and		opportunity- assessment-projects
		research institutes.		http://nohfc.ca/en /programs/northe n-innovation- program-applied- research- technology- development-
				<u>projects</u> <u>http://nohfc.ca/e</u> <u>/programs/northe</u> <u>n-innovation-</u> <u>program-pilot-</u> <u>demonstration-</u> <u>commercialization</u> projects

Québec

Nom de l'initiative	Type d'initiative	Description	Organisation(s) administratrice(s)	Site Web
Développement de produits issus de la chimie verte	Financement direct d'activités Investissement en infrastructure	Le développement de produits issus de la chimie verte soutiendra la construction d'une usine de démonstration de filaments de cellulose à l'usine de Kruger de Trois- Rivières. Cette usine permettra de mettre au point des produits issus de la fibre de bois ayant des attributs physiques, environnementaux et des performances capables de concurrencer les matériaux issus de la chimie des hydrocarbures. L'échéance est de 2013-2014 à 2015-2016. L'initiative a reçu un total de \$37 500 000 du Gouvernement du Canada, de l'Industrie Kruger, du Ministère de Ressources naturelles de Québec, du Gouvernement de la Colombie-Britannique, d'un prêt d'Investissement Québec, et d'une contribution de l'industrie via la vente de filament cellulose.	FPInnovations	http://www.fpinno vations.ca/MediaCe ntre/PressReleases/ 2013/1121-quebec- octroie-du- financement-pour- favoriser- linnovation- forestiere.pdf
Développement de produits issus de la chimie verte	Financement direct d'activités	Le développement des extractibles forestiers vers l'optimisation et la mise à l'échelle de quatre familles de produits créés à partir de la biomasse forestière (écorce et copeaux) essaie de produire, sur une base commerciale, plusieurs bioproduits et biomatériaux disponibles à des prix concurrentiels. Les 4 familles des produits soutenus par ce projet sont les antioxydants naturels, les bioacides, les résines et acides gras et phytostérols, et les mousses isolantes. L'échéance du projet est de 2013-2014 à 2018-2019.	Centre de recherche industrielle du Québec (CRIQ)	<u>http://www.criq.qc.</u> <u>ca/fr/le-criq-en-</u> <u>bref.html</u>

Québec

Nom de l'initiative	Type d'initiative	Description	Organisation(s) administratrice(s)	Site Web
		La Ministère de Ressources. naturelles Québec contribue 3 100 000 \$, les partenaires financiers industrie 400 000 \$, et les partenaires financiers publics 400 000 \$.		
Développement de produits issus de la chimie verte	Financement direct d'activités Développement de marché ou accès au marché	Le développement de trois produits à partir de la technique de l'extraction des sucres contenus dans les fibres de bois. Ces produits potentiels seront conduits jusqu'à l'étape de prototypage afin qu'au moins, deux d'entre eux soient pré commercialisés. Des partenaires industriels pourront développer des canaux de commercialisation et des créneaux potentiels. L'échéance pour ce projet est de 2013-2014 à 2016-2017. La Ministère de Ressources naturelles Québec contribue 1 750 000 \$ au projet et les partenaires financiers industrie 367 000 \$.	FPInnovations	http://www.fpinno vations.ca/Research Program/Pages/pro gramme-recherche- biomateriaux.aspx
Développement de produits issus de la chimie verte	Financement direct d'activités Investissement en infrastructure Développement de marché ou accès au marché	Ce projet vise à améliorer la position concurrentielle de l'usine Norampac-Cabano par la diversification de ses produits avec la fabrication de nouveaux bioproduits. Ces bioproduits seront le résultat de l'implantation d'un procédé qui consiste à implanter une innovation associée au traitement des extraits de bois. L'échéance de ce projet est 2013-2014 à 2014-2015. La Ministère de Ressources naturelles Québec contribue 4 368 000 \$ au projet et Ressources naturelles Canada 10 000 000 \$.	Norampac	http://www.cascade s.com/fr/developpe <u>ment-</u> durable/environne <u>ment/</u>

Québec

Nom de l'initiative	Type d'initiative	Description	Organisation(s) administratrice(s)	Site Web
Développement de produits issus de la chimie verte	Financement direct d'activités	 Ce projet consiste à extraire des nouvelles fibres à partir du procédé de la pâte thermomécanique (PTM), afin de développer différentes applications pour permettre la substitution à d'autres matières tel que la fibre de verre, des polymères, le lin ou le chanvre. La fibre PTM permet de cibler aussi des marchés tel que celui des composites bois-plastiques, celui de l'industrie de la construction etc. L'échéance du projet est 2013-2014 à 2016-2017. La Ministère de Ressources naturelles Québec contribue 3 000 000 \$ au projet et Ressources naturelles Canada, à travers du programme Investissements dans la transformation de l'industrie forestière (ITIF), contribue 10 000 000 \$. Le versement de cette aide est conditionnel à une entente avec le Gouvernement du Québec à survenir au cours des prochains mois. 	S.E.C. Papier Masson White Birch	http://www.papiers whitebirch.com/fr/ home.html

Saskatchewan

Name of Initiative	Type of Initiative	Description	Administering	Website
			Organization(s)	
Fuel Log	Direct funding of activities	Saskatchewan's Go Green program provided	Titan Technologies	<u>http://www.titan-</u>
Densification		funding to Titan Technologies for the		projects.com/
Initiative	Infrastructure investment	development of an innovative technology that		
		converts under-utilized biomass such as oat		
		hulls and forestry residues into fuel logs. This		

Saskatchewan

Name of Initiative	Type of Initiative	Description	Administering Organization(s)	Website
		conversion process, known as densification, produces fuel logs that are carbon-neutral. The fuel logs offer a viable alternative to coal as they are both cleaner and hotter burning than coal.		
Meadow Lake Wood Pellet Project	Direct funding of activities Infrastructure investment Fostering collaboration	Under Saskatchewan's Go Green Fund, a financial assistance program for sustainable initiatives in the province, funding had been allocated to a multi-year agreement with the Meadow Lake Tribal Council Resource Development Limited Partnership (MLTC) for the Meadow Lake Wood Pellet Project. The funding supported construction of a pilot plant that can produce approximately 10-20 tonnes of pellets per day from sawmill waste material that is typically incinerated. The plant runs only when the MLTC requires wood pellets for the two heating projects they are currently evaluating. If the MLTC plans a larger-scale project, the wood pellets produced by the plant would be used to defray heating costs in MLTC member communities. The MLTC would also evaluate sales opportunities	Meadow Lake Tribal Council Industrial Investments	http://www.mltcro .ca/industrial- synergy/mltc- wood-pellets/
Meadow Lake Bioenergy Power Facility		 for the wood pellets in a longer-term project. The Meadow Lake Tribal Council Industrial Investments LP and the Meadow Lake Tribal Council Resource Development RP (RDI) are in the final development stages of a biomass baseload power generation project that will be located east of Meadow Lake, near the NorSask Forest Products site. The largest project ever undertaken by RDI and MLTC, this bioenergy power facility will use mill residue from the NorSask Forest Products 	Meadow Lake Tribal Council Industrial Investments and RDI	http://www.mltcru .ca/industrial- synergy/mltc- bioenergy-centre/

Saskatchewan

Name of Initiative	Type of Initiative	Description	Administering Organization(s)	Website
		sawmill to generate up to 36 megawatts of renewable low-emissions power, which is enough to power roughly 30,000 homes.		
		RDI has signed a 25-year power purchase agreement with SaskPower, the primary supplier of electricity in Saskatchewan, a first of this size for a First Nation corporation in the province. According to SaskPower, Saskatchewan will need 4100MW over the next twenty years. The Meadow Lake Bioenergy Power Facility offers an environmentally friendly alternative that will help to fulfill some of this requirement.		
Strand Screening for Product Diversity		Under the Investments in Forest Industry Transformation initiative, the Strand Screening for Product Diversity initiative will support the development of oriented-strand board (OSB), a key product in North American home building. Innovative technologies will enable Tolko Meadow Lake OSB to both remove unusable wood dust, and sort input fibre. The sorted fibre can thereafter be used in different orientations, and different locations within the panel to produce panels with different properties, such as enhanced strength. This will allow Tolko Meadow Lake OSB to produce a wider range of products while reducing production costs for commodities on the same production line. This results in enhanced quality for existing products and new capacity for higher-value products, all while decreasing costs and improving performance. The total project cost	Meadow Lake OSB - Tolko Industries Ltd.	http://www.tolko.o om/index.php/sus ainability/forest- certification/meado w-lake-osb http://cfs- scf.nrcan- rncan.gc.ca/selectiv e-cuttings/62

Saskatchewan

Name of Initiative	Type of Initiative	Description	Administering Organization(s)	Website
		is approximately \$10 million and was approved in March 2011.		
Results Based Regulations / Environmental Code	Standards or regulations	Saskatchewan's new way of protecting the regulated environment is to define the desired outcome by law and empower the operator to determine how that standard will be achieved or surpassed. The province's new results- based regulations and environmental code provide a clear, concise statement of the policies, objectives and best practices that govern the management and protection of the environment in Saskatchewan, with an emphasis on outcomes, a compliance-based knowledge enhanced through education efforts, and online business services for faster service.	Saskatchewan Ministry of Environment	http://www.enviro nment.gov.sk.ca/Ro gulations

Yukon

Name of Initiative	Type of Initiative	Description	Administering Organization(s)	Website
Northern Bioenergy		The Northern Bioenergy Facility is an infrastructure	Ventek Energy	n/a
Facility		heating project in Dawson City, Yukon that will serve to	Systems	
		demonstrate the practical application of wood products as		
		a sustainable resource for renewable heating systems.		
		Greater efficiencies will also be gained in the utilization of		
		the varied stand structure (timber grades) found in Yukon		
		boreal forests. Funded in part by Infrastructure Canada		
		(75%) and by the Government of Yukon (25%), the		
		project involves the construction of a building to house a		
		wood chip boiler to produce bioenergy for use in the local		

Yukon

Name of Initiative	Type of Initiative	Description	Administering Organization(s)	Website
		community. The wood chips will be sourced from the wood waste of a local sawmill. Chip boiler production will be used to heat a waste water treatment facility in addition to other government buildings. The use of biomass for heating will displace diesel currently used to heat community buildings.		
Yukon Forestry Agreements		In areas of Yukon with completed Forest Resource Management Plans, the Government of Yukon has signed (and is in the process of drafting) forestry agreements with Yukon First Nations that clearly define respective roles and responsibilities in regard to implementation of those plans. The agreements affirm commitments and objectives signed by the Minister (Yukon Government) and by the Chief (First Nation) and are accompanied by a work plan that further defines tasks and deliverables, respective roles and responsibilities, timelines and budget. They provide a basis for governments to achieve targeted deliverables with a 5 year planning horizon. Importantly, they facilitate meeting	The Government of Yukon	n/a
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* At the time of publication, no information was available on initiatives for Prince Edward Island or Nunavut.