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## Rejuvenating the economy of Eastern Ontario through Sustainable Forests and Eco- industrial Development

By Brian Barkley and  
Sandra Lawn of the Eastern  
Ontario Model Forest with  
input from Ian Manson,  
MNR economist and others

January 30, 2009

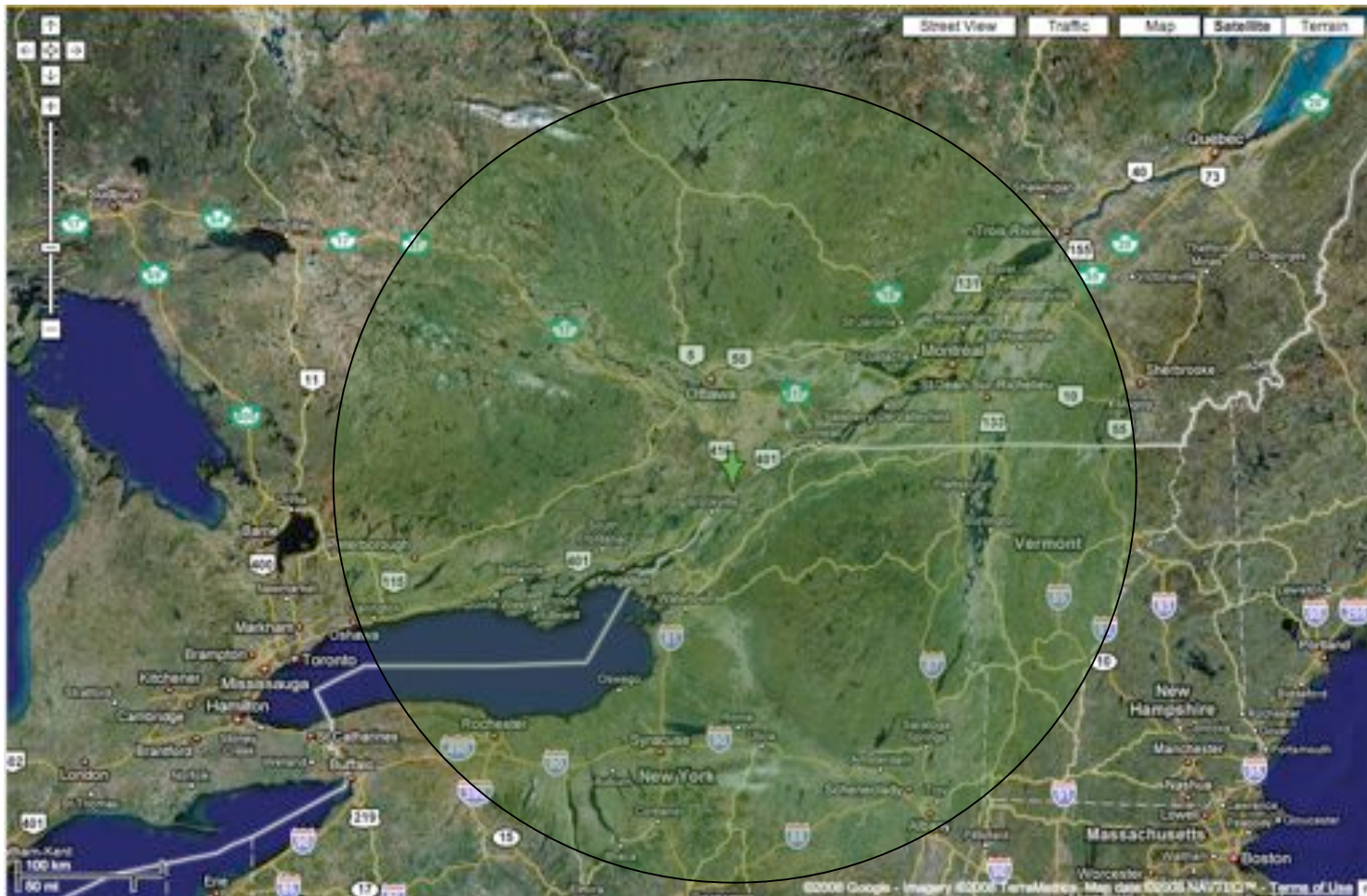


# Outline

1. What? Rejuvenating the forestry industry of Eastern Ontario
2. How? Master plan based on solid science, emerging technology and knowledge of the traditional forestry industry
3. Why? The economy and environment are the drivers.
4. Who? Partners from all levels of government and champions of this project
5. When? Building on momentum of past five years and growing number of serious advocates



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A sustainable and substantial mixed  
hardwood forest base



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## WHAT? Ontario East Wood Centre & Eco-Industrial Park

The OEWC: thriving best practices centre of excellence for wood fibre-based enterprise (solid wood, fibre, chemicals, energy) that brings together technology, science and entrepreneurship in support of the rural economy of Ontario, sustainable forests and sustainable communities

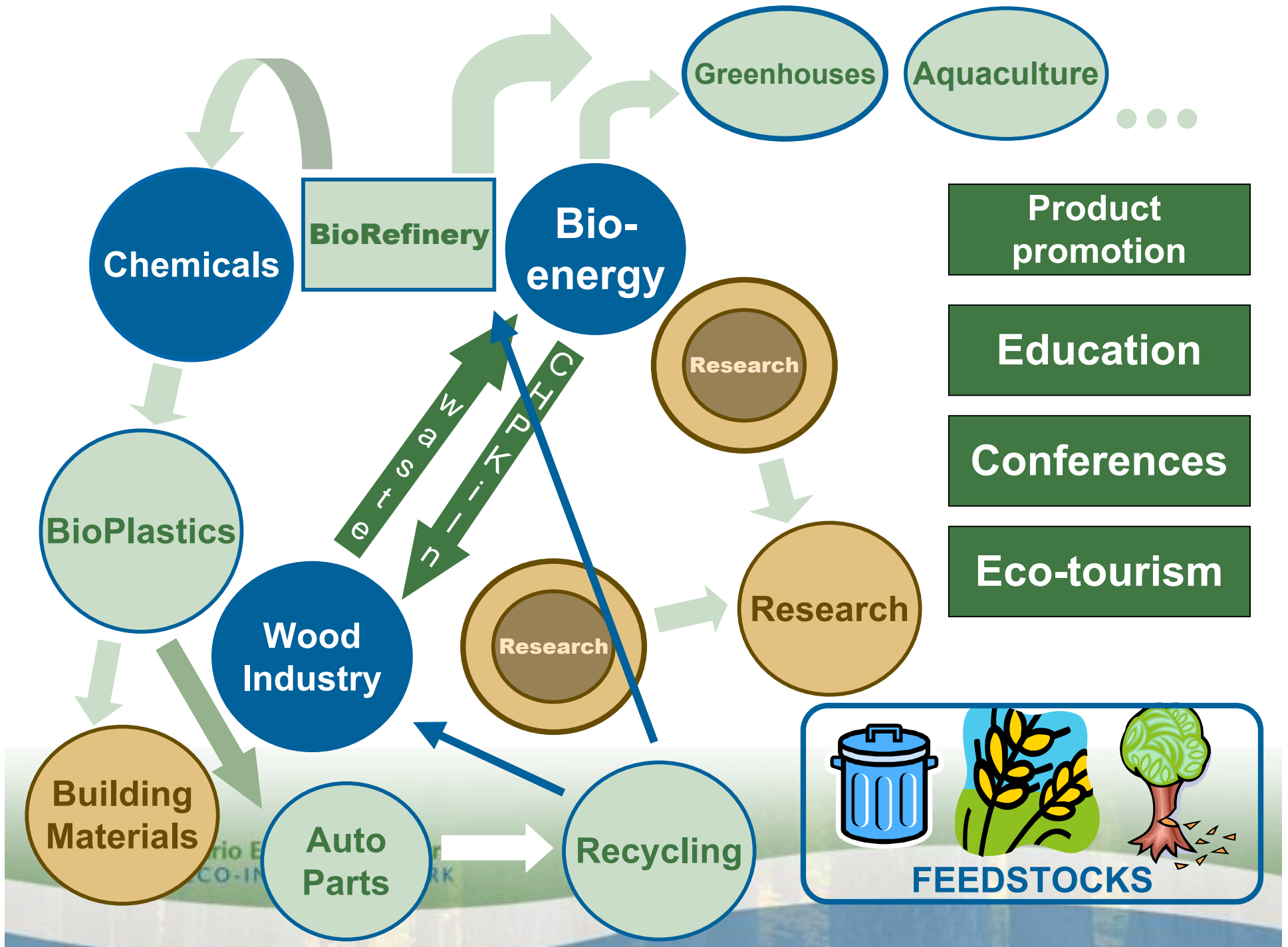


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## Bird's Eye View - including GreenField



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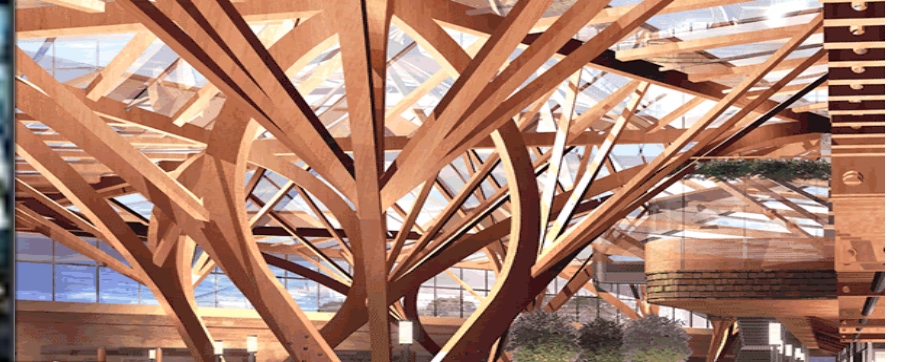
# Unsurpassed transportation and land availability



# Building with Wood

\$2.5 Billion with 8,000 jobs in 2005

- Engineered Wood
- Manufactured Housing
- Boards/Panels



# Living with Wood

\$4.7 Billion with 30,000 jobs in 2005

- Furniture – home + office
- Millwork – Windows/doors
- Other Wood
- Pallets and Crates



# Energy Systems

- Heat and Power
- Refining
- New Opportunities



# R&D&D

- Research – solid/bioproducts
- Market Research
- Training
- Incubator



## Focus on extensive hardwood forests of Eastern Ontario:

- New energy technologies utilizing woody biomass as base; conversion from coal
- Advanced wood based materials, furnishings etc.
- Emphasis on processing, products and energy
- Platform for scientific collaboration and business development
- Bring researchers and entrepreneurs together to create, develop, commercialize and market their innovative products to the world
- Value of forest resource inventory of hard wood forests and locations for fast growing trees



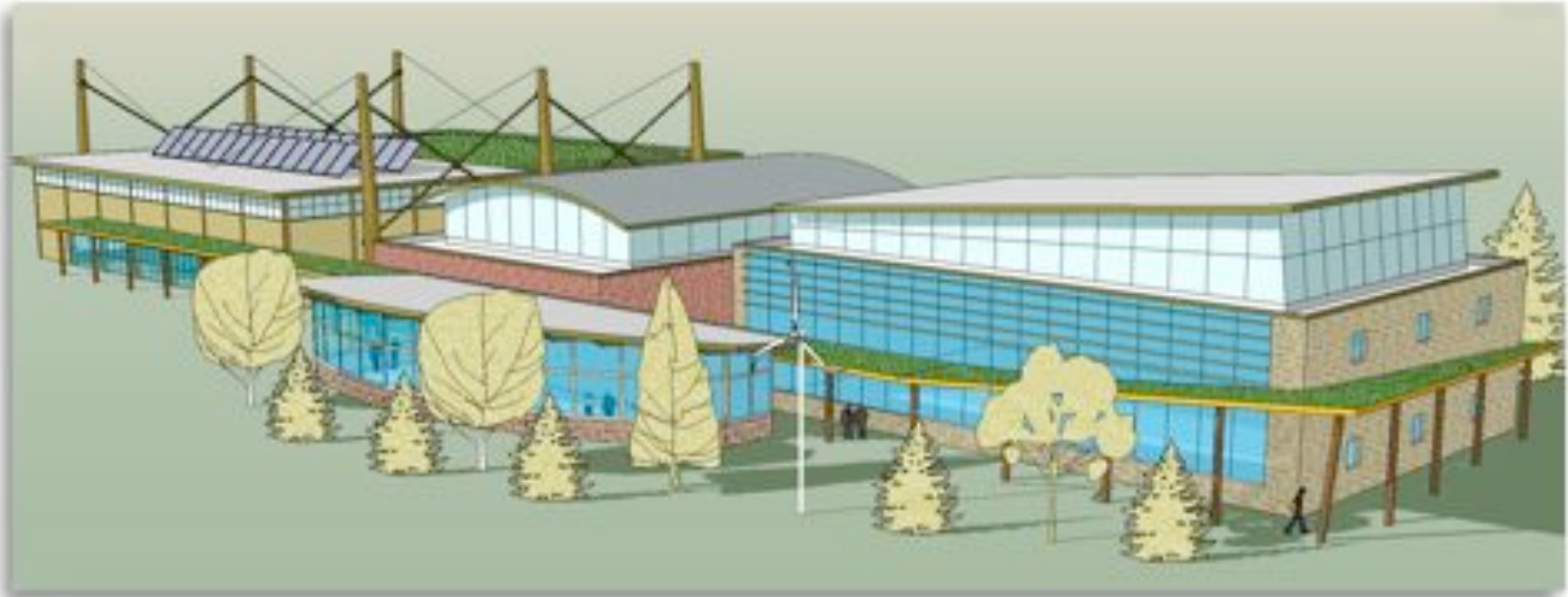
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# RD&D and commercialization

1. Research partnerships with a range of agencies, companies, topics and products.
2. From forest inventory and transportation, field studies to engineering, to nanotechnology - to socio-economic research and advanced systems of processing and production
3. Incubator space for developing research and business to the next stage, lab to product
4. Training of students, internships, employment; current critical need for training for stationary engineers class 1 to 4
5. Mentoring of new companies, including consulting contracts
6. Space to build pilot plants and other facilities
7. Cost-sharing and availability of a wide range of wood materials, and other forest related plant materials
8. Access to wet and dry labs, pilot-scale facilities, state-of-the-art equipment, technological and administrative services
9. Access to IRAP resources and funding, anticipated MOU between IRAP and EOMF



# Preliminary Concepts for the RD&D: LEED standards recommended (Leadership in Environmental and Energy Design)



Ted Wilson, Totten  
Sims Hubicki  
Associates



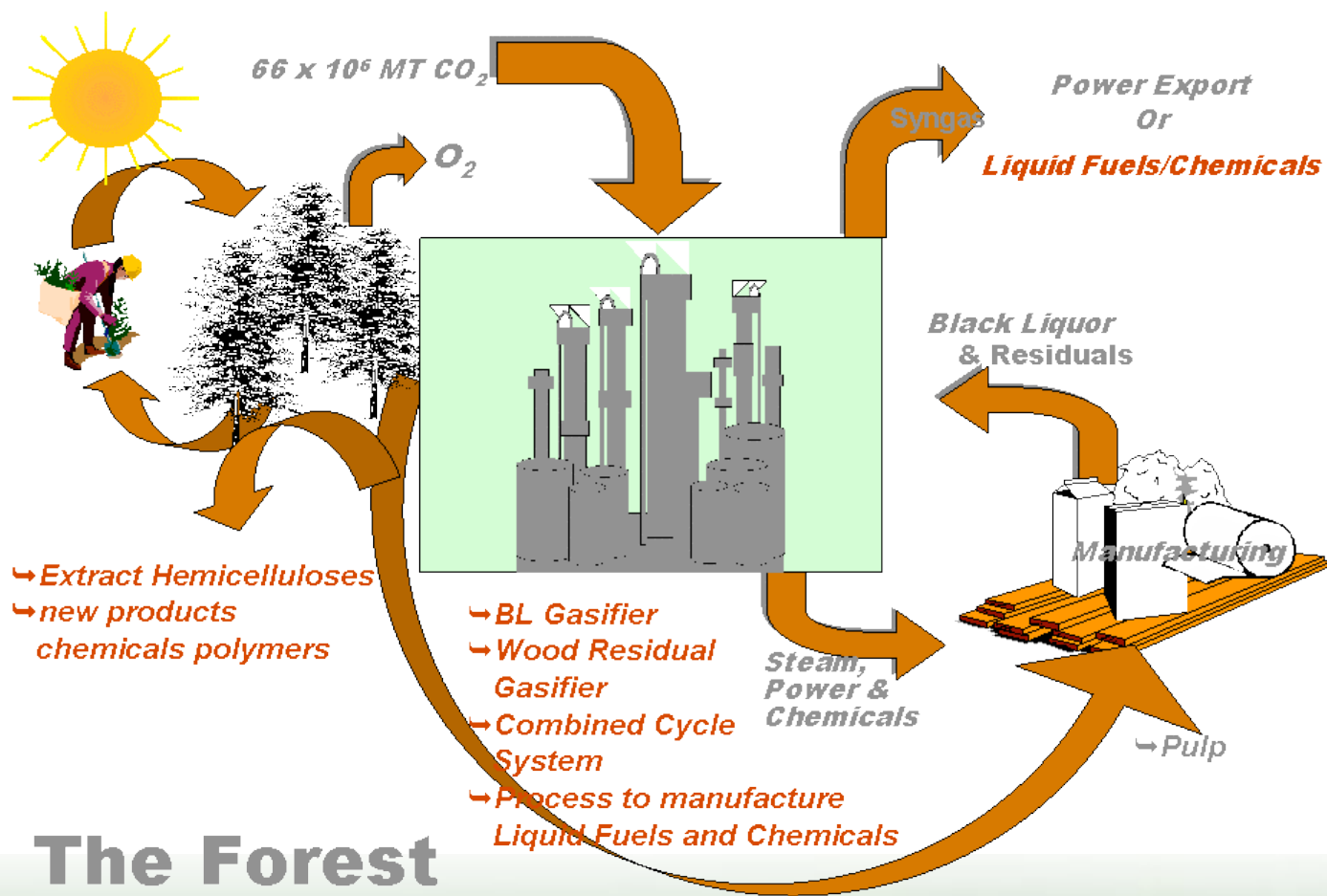
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# Building the Vision for an eco-industrial cluster based on wood fibre



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Thanks to SUNY Syracuse; Faculty of Forestry and the Environment



# The Forest Biorefinery



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# Home construction and renovation included in federal budget

- natural materials: wood siding, solid timber interior, beams floors, cabinetry
- modular
- need good housing”where people feel good” Margaret George
- Six-sided or square
- central “great room” or meeting place
- designed to take advantage of renewable natural resources
- training re construction and assembly



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# A lot going on...



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The industry is hurting today but readying for tomorrow



# Eastern Ontario wood flow

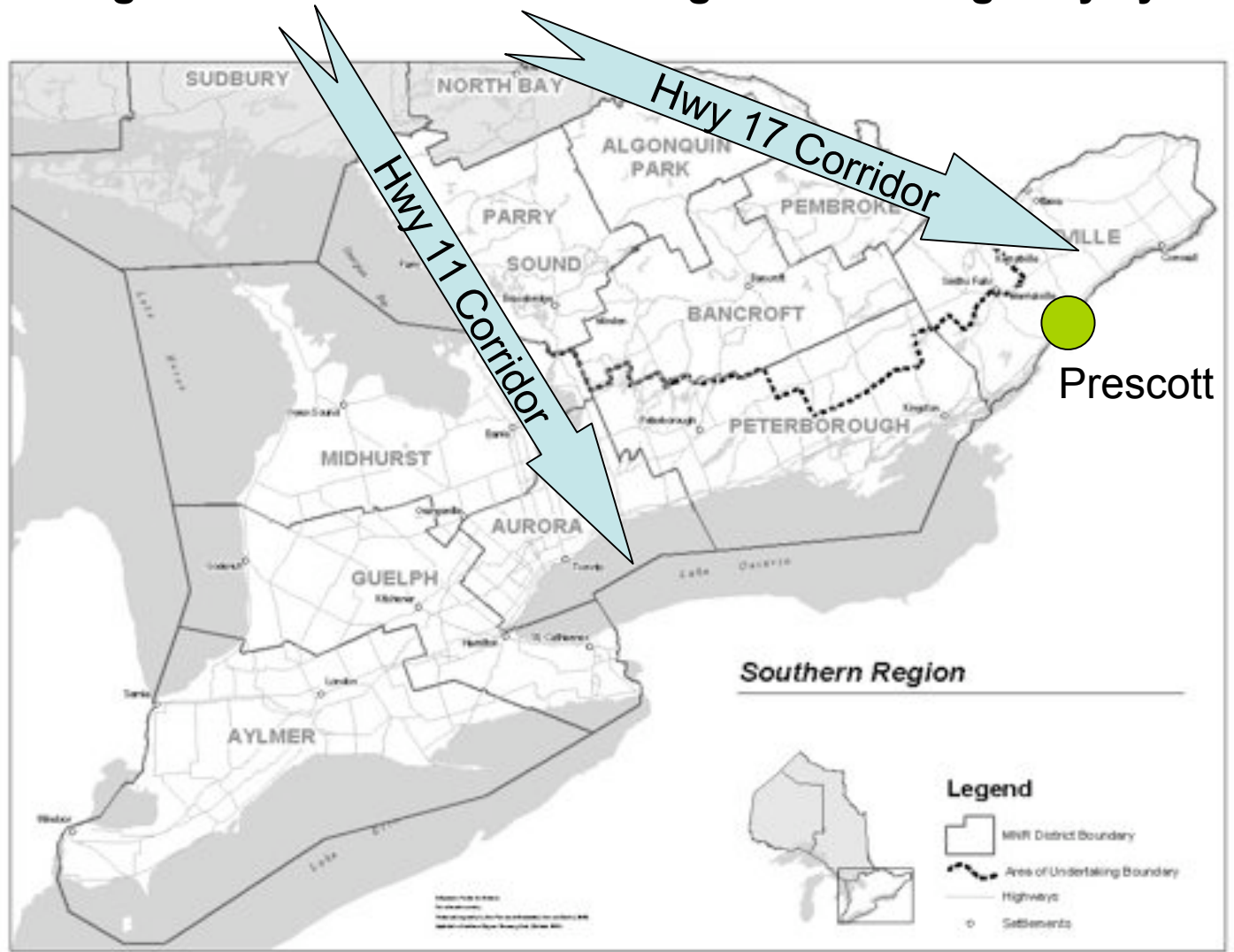


- 25% of the value of wood commodities flowing through Eastern Ontario is passing on Highway 401
- 11% is moving on Highway 417/17



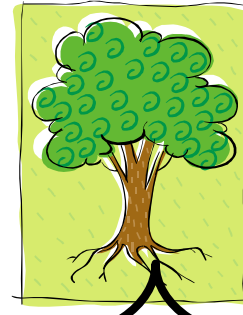
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**45 mills generate 1 billion board feet of SPF lumber annually, flowing into Southern Ontario using these two highway systems**



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# What are value-added wood products?



- **Timber**
- **Traditional**
- **furniture**
- **cabinets**
- **millwork**
- **EWPs**
- **boards**
- **mfd housing**
- **converted papers**

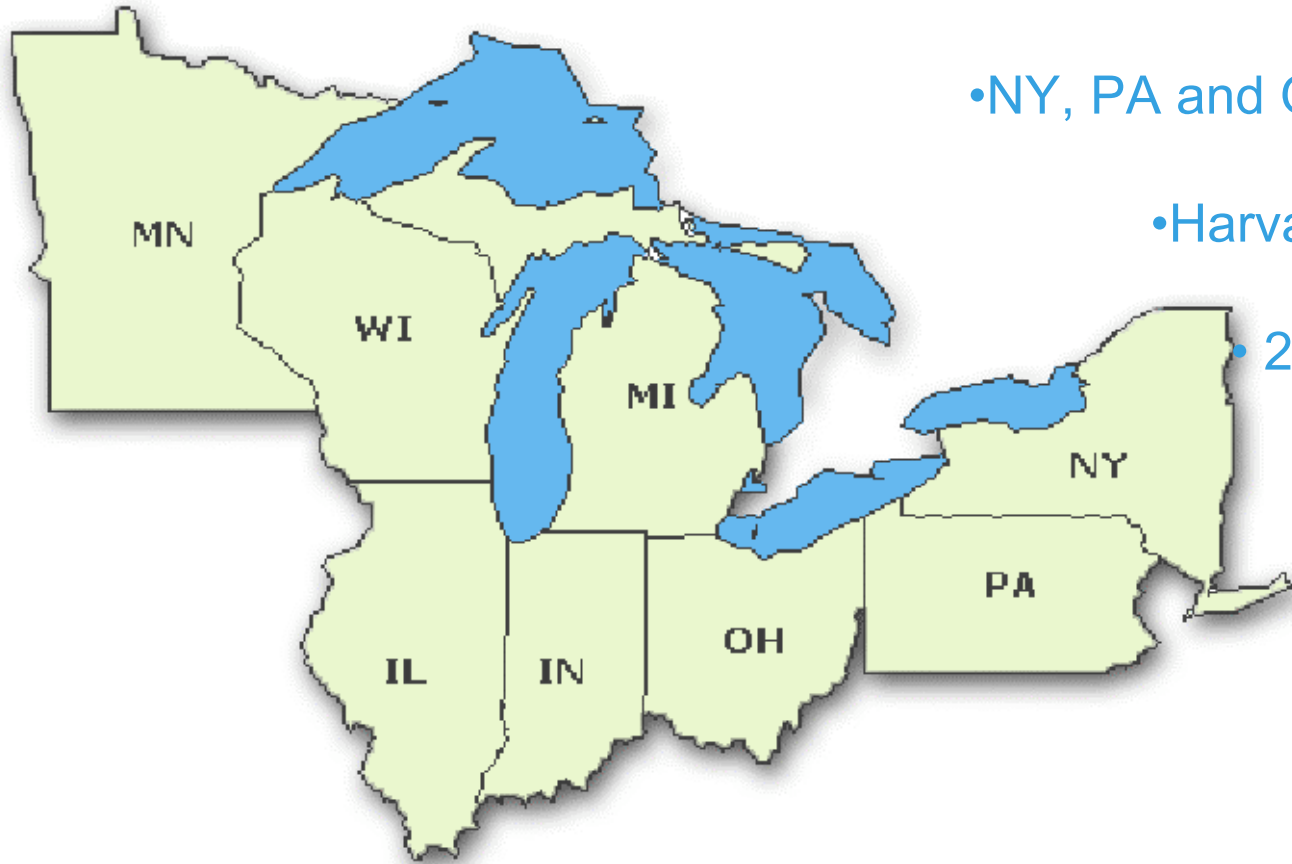
- **Plants**
- **Non-Timber Products & Services**
- **health care**
- **personal care**
- **foods**
- **crafts**
- **decorative**
- **recreation**
- **services**

- **BioMass**
- **BioProducts**
- **bio-fuels**
- **bio-materials**
- **bio-chemicals**



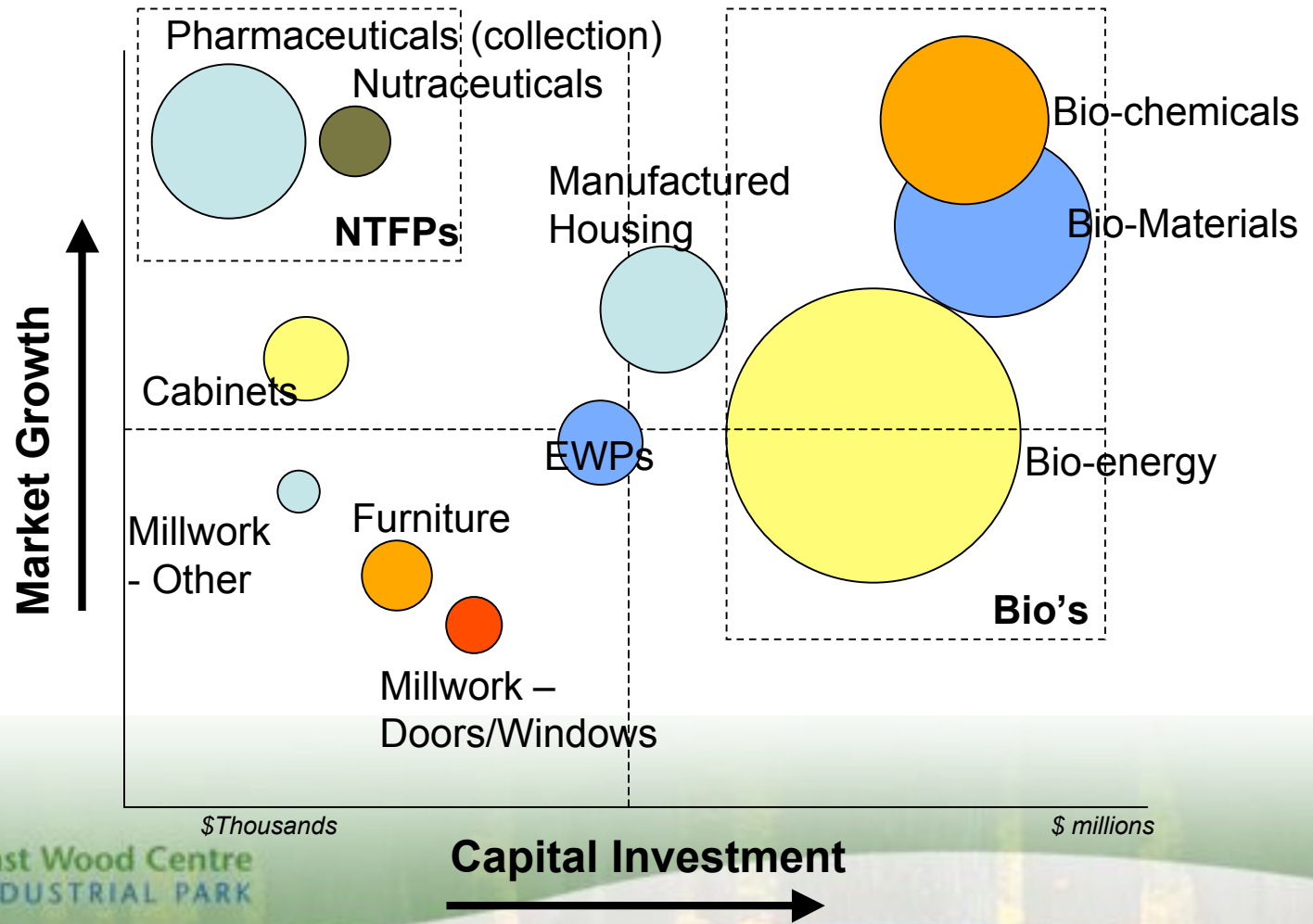
# Markets in the USA for Value-Added Wood Products

- Ontario exported \$1.9B wood products in 2002
- NY, PA and OH = 33% or about \$700m
- Harvard Joint Centre for Housing Studies
- 2009 federal budget



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# Best Opportunities



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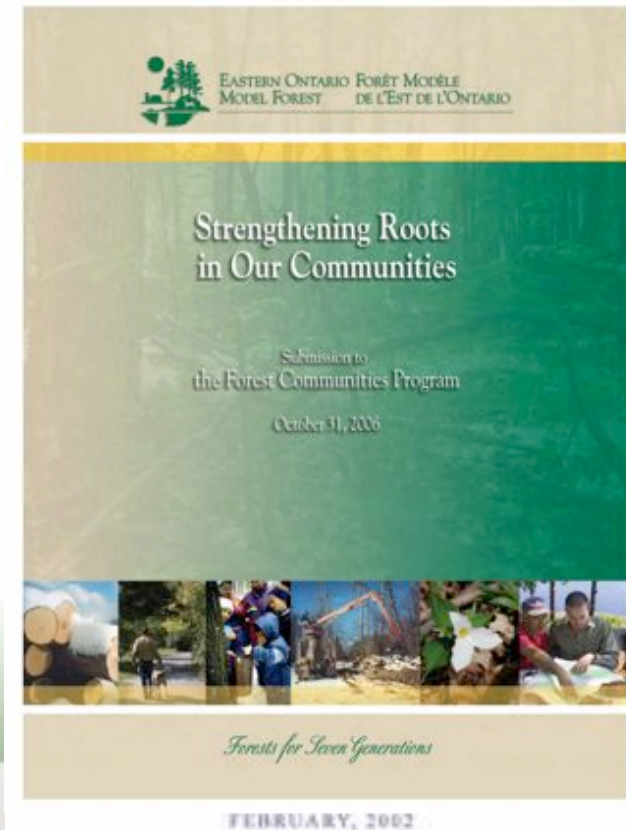
# WHO? Eastern Ontario Model Forest & the Forest Communities Program

*Our vision of forests for seven generations is a sustainable landscape valued by all communities.*



EOMF mandate - **to provide a platform for collaborative community efforts to promote and ensure sustainable forest communities.**

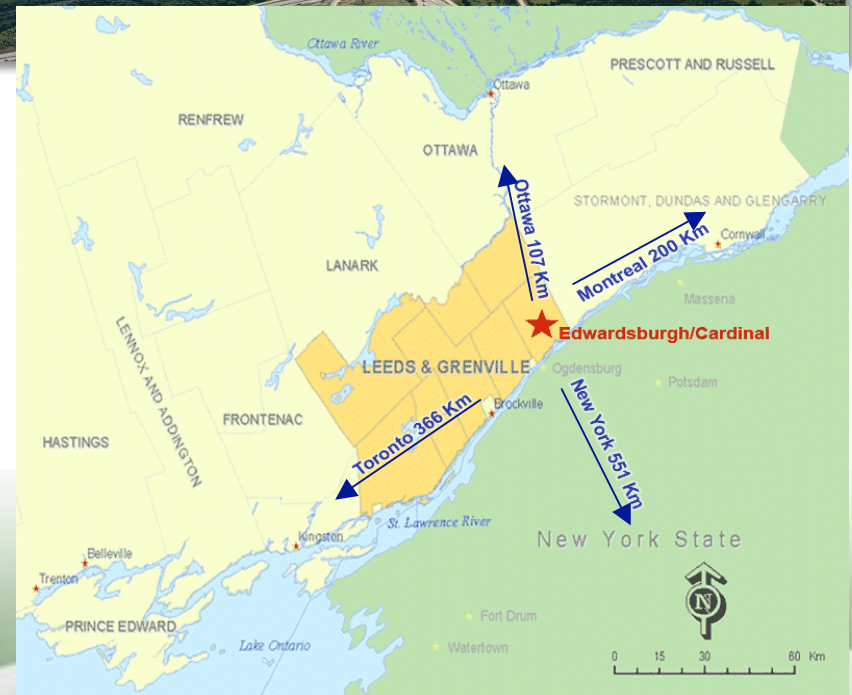
[www.eomf.on.ca](http://www.eomf.on.ca)



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# WHO? Township of Edwardsburgh/Cardinal

Plus 10,000 acre  
Ontario  
landbank



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# Port of Prescott: [www.portofprescott.com](http://www.portofprescott.com)

- Five minutes access to 401, 416, main rail line and bridge to USA
- facility essential to all of eastern Ontario - 100 jobs, \$11 million impact to region/year
- Grain cleaning, drying and storage for 150,000 tonnes
- Bulk cargo docks
- Seaway draft at all births
- Currently underway:
  - steel clad offices \$ 25,000
  - dock paving & repairs \$ 25,000
  - roof repairs \$ 50,000
  - self unloading hopper \$125,000
  - dredging \$ 25,000
  - fall arrest-rail car \$125,000
  - #2 belt replacement \$ 45,000
  - \$3 Million has been approved to create four steel tanks
- Bulk cargo docks
- Dock services: stevedoring, storage, transfer
- **business plan for \$33 million expansion submitted to Building Canada Fund**



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# Cardinal Power of Canada L.P.

- One of largest cogeneration plants in Ontario
- Part of Macquarie Power & Infrastructure fund
- Natural Gas (from Alberta)
- Manager supportive of OEWC concept - “great idea”
- Feeds to Benson Public School
- Feeds to OPG Grid
- Feeds to CASCO (150 year old, 270 employees, corn bioproducts plant still going strong!)



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# GreenField Ethanol opened in December 2008

- 200 million litres of ethanol per year
- 50 permanent jobs
- By-products: heat, carbon dioxide and dry distillers grain
- \$150 million dollar construction
- 200 million bushels of corn mostly from local farmers
- Cellulosic ethanol fibre interest



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# OEWC and Colleges and Universities:

Bridging the gap between research and commercialization - RD&D

## 1. Universities:

- University of Toronto: ITeam, Faculty of Forestry, Wood Chemistry and TAG
- Queen's University: Centre for Bioeconomy and Director of Research Services, School of Business, Faculty of Engineering, partnership re: Bioenergy Discovery workshop re Forest Resource Inventory (March 2009)
- SUNY Syracuse: TAG and Faculty of Forestry and the Environment
- Ottawa University
- McGill University
- Guelph University; Kemptville Campus
- St. Lawrence, La Cité Collegiale and Algonquin Colleges



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# Training is another key; Message from Dean of Brockville Campus of St. Lawrence College

Thank you for sharing the information on such an exciting project. I commend you and your group for moving such a great idea to action.

As I read through your backgrounder provided and thinking about how St. Lawrence College may become part of this project, I envision that we may have staff at our three campuses who may be interested in being part of the education and training initiatives. We have a number of faculty who have incredible facilitation skills that are transferable to both corporate training and youth education.

There may be an interest from our staff to participate in short-term training projects or comprehensive courses.

These education and training initiatives may be class room based or web-based.

I look forward to continuing to hear about your project.

Beverlie Dietze, Ph.D.  
Campus Dean, Brockville  
St. Lawrence College



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# OEWC and the Province

1. Green Energy Act to be introduced February 17, 2009
2. Ministry of Natural Resources
  - support, research, advocacy
  - local office: support and encouragement
  - Working with team from Peterborough office and Queen's on Bioenergy Discovery (forest inventory)
3. Ministry of Research and Innovation
4. OMAFRA close collaborator
5. Presentation to EDT Business cluster in Toronto, September 3, 2008; well received
6. MOE, MA&H, ED&T collaborating
7. ~~EOMF is partner with new Ontario Wood Products Export Association~~



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## EOMF/OEWC and Federal agencies work with us

### 1. NRCAN:

- Canadian Forest Service
- FP Innovations

### 2. Industry Canada: Fed/Nor/EODP Regional/Grenville Community Futures

### 3. Doyletech working with us

### 4. Indian Affairs and Northern Development (not enough progress here)

### 5. National Research Council:

- IRAP
- Institute for Research in Construction
  - Have had research agenda for housing in the far north
- Institute for Chemical Process and Environmental Technology
- Life Sciences: National Bioproducts Program: esp. chemical and ethanol production from lignocellulosic materials from forestry and/or agricultural biomass and biomaterials and bio-polyols for energy, construction, automotive, plastics and aerospace industries,



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## Strong Support for EOMF's LOI for Sustainable Energy and Natural Resources Centre of Excellence for Commercialization and Research from:

1. Dan Roberts, Managing Director, Forest Products and Bio-Energy Equity Research, CIBC World Markets
2. Mark Speers, Director, Industry Relations Branch, Forests Division, Ministry of Natural Resources
3. F. Henry Lickers, Director, Department of the Environment Mohawk Council of Akewesasne
4. Marc McArthur, Mgr., Ottawa Cleantech Initiative
5. Timothy A. Volk, Senior Research Associate and SUNY College of Environmental Science and Forestry
6. Dean Tat Smith, Faculty of Forestry, University of Toronto
7. Philip Scwab, VP, Industry Relations, BIOTECanada
8. David Winston, RPF, GM of Canadian Model Forest Network
9. Dr. Robert Graham, Chair, Ensyn Corporation; (\$50,000/annum commitment)
10. Susan Marlin, Associate VP (Research) Queen's University
11. Brian Wilson, Director of Programs, Science and Programs Branch, Canadian Forest Service
12. Tom Richardson, General Manager, Mazinaw-Lanark Forest Inc.
13. Janusz Lusztyk, Director General, Institute for Chemical Process and Environmental Technology, National Research Council (\$100,000 in-kind /annum pledge)
14. Dr. Jack Sadler, Professor and Dean, Faculty of Forestry, University of British Columbia
15. Mark Hubert, Vice-President, Climate Change Leadership, forest Products Association of Canada



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# OEWC and Private enterprise (solid wood)

1. regional Building With Wood project: Doyletech of Ottawa working for EOMF
2. housing components firm well established in Eastern Ontario, needs to relocate
3. small and medium enterprise: sawmills, lumber companies, housing and components producers, artisans throughout Eastern Ontario: - over 100 contacted in past week as well as previously
4. suppliers and services - local and int'l interest mounting
5. wood related business; FSC chain of custody, certification in southern Ontario rising rapidly



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# Private enterprise interests emerging in recent month; land acquisition looming

1. several biofuel/bioenergy businesses in early stages of direct involvement: e.g. five bioenergy companies approached us in in week of January 26, 2009
2. press release, January 30, 2009 from Terra Preta Energy Group of Ottawa re new Biomass Pellet and Biomass Fuelled CHP at the OEWC & Eco-Industrial Park
3. European technology proponent needs to establish pilot plant
4. FSC Certification of private lands and chain of custody doubled in 2008
5. serious discussion with FP Innovations
6. GreenField Ethanol now confirmed as anchor



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# To Sustainable forests and sustainable communities our next steps are:

## Maintaining the Momentum - “we cannot miss a step”

- Provincial champions approach with MNR in the lead
  - MNR, ME, MRI, MOE, MA&H, ED&T and ...
- RD&D: universities, colleges, NRC, FPInnovations
- Federal champions approach with NRCan in the lead
  - NRCAN, INAC , Industry Canada, Environment Canada

## Next steps:

- leadership of federal and provincial champions declared
- EODP Regional (Doyletech) project successful
- securing the Public Anchors for RD&D (Ontario wood Science Innovation Centre)
- layout/design of RD&D complex; business case to be completed by Queen’s School of Business by mid-March
- “signing on” of: SMEs, MNEs - Doyletech project and others
- Agreement with the township re: sale of lands; establishment of LEED and other standards for buildings and development
- installation of roads etc., detailed engineering/planning as lands sold



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## Eastern Ontario Model Forest

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613-925-5568

## The Township of Edwardsburgh/Cardinal

Larry Dishaw, Mayor  
[mayor@edwardsburghcardinal.ca](mailto:mayor@edwardsburghcardinal.ca)

Russell Trivett, CAO  
[rtrivett@edwardsburghcardinal.ca](mailto:rtrivett@edwardsburghcardinal.ca)  
613-658-3055



# EASTERN ONTARIO MODEL FOREST

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