



Need for a Sustainable BioResource Strategy?

Given prospect of a biorefinery future?

Scott McCoombs

Nova Scotia Department of
Energy

What is a Biorefinery?

- An integrated plant using various extraction and transformation pathways to produce multiple value-added products from a range of renewable feedstocks
- Feedstocks: renewable supplies of carbon based materials including wood fibre, biosolids, etc.
- Outputs: biofuels, building block molecules, biodegradable polymers, specialty chemicals

Canadian Forest Biorefineries Roadmap Initiative



Why now? Forestry represents a significant part of Nova Scotia's economy and needs to become more competitive to remain viable

- Review of Nova Scotia's Energy Strategy
- Pressure to use biomass for energy generation
- If energy, then in what form? Co-firing, cogeneration (small scale/large scale), cellulosic ethanol?
- Investments today will be with us for 25+ years
- Perhaps 25 years before biorefineries are on-line?
- Is energy the best use of the biomass?
- What if chemicals provide more value? What's the ideal mix between chemicals/energy given current markets?
- What is on the horizon? What are the new pathways? Which ones result in the greatest GHG reductions? What about net economic return?

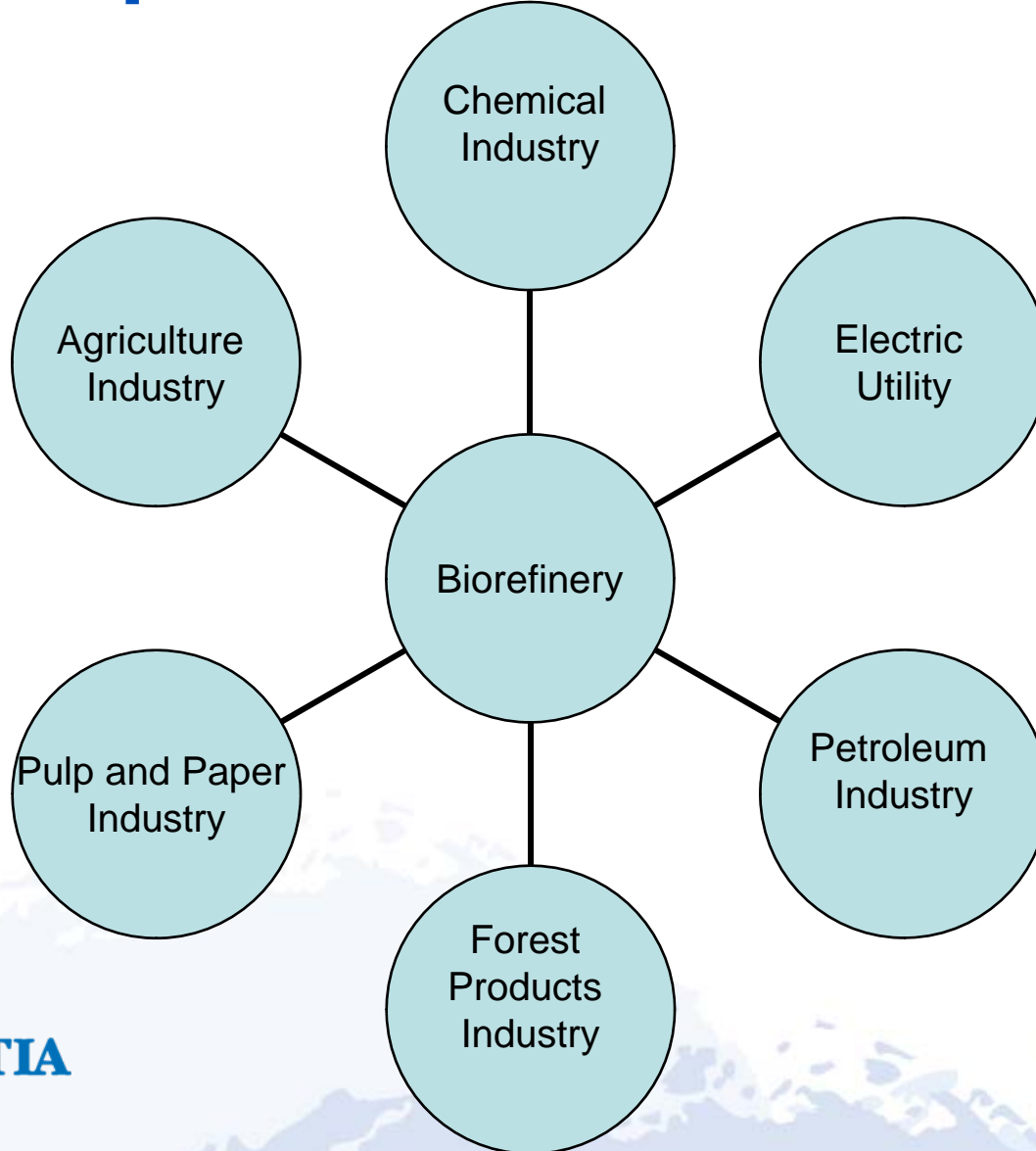
What's happening around us?

- 2007, U.S. DOE awarded \$385M to six biorefinery projects
- 2007, Canada set up \$500M Next-Gen Biofuels Fund

What would a strategy include?

- Review of Existing Infrastructure (kraft, chemical and mechanical pulping operations)
- Research Priorities
- Policy Development Needs
- Identification of Synergies
- Investment Strategy
- Assessment of Sustainability
- Public Outreach

Requires New Partnerships



Create Linkages with Others

- **Ensure Energy Policy supports overall Forest and Agricultural Industry Strategic Plans**
 - Canadian Forest Biorefining Network (CFBN)
 - FPinnovations (FERIC, FORINTEK and PAPERICAN)