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## SUSTAINABILITY AND THE SEMINAR SERIES

### OPPORTUNITIES FOR COLLABORATION BETWEEN FOREST AND CHEMICAL INDUSTRIES

**Date:** Wednesday, March 26th, 2008  
**Time:** 4:30 p.m. – 6:00 p.m.  
**Location:** Lambton College - 1457 London Road, Sarnia, Ontario, N7S 6K4  
**Room:** N105  
**Cost:** Free

### AGENDA

#### Introductions

**Maike Luiken**, Ph.D., Chair, IEEE London Section,  
Dean, Applied Research, Business Development & Innovation,  
Sustainability Development  
Lambton College

#### Keynote:

**OPPORTUNITIES FOR COLLABORATION BETWEEN FOREST AND CHEMICAL INDUSTRIES**

#### Keynote Speaker:

**Tom Browne** - Program Manager, Mechanical Pulping and Sustainability,  
FPInnovations – Paprican

#### Questions and Answers and General Discussion





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## **OPPORTUNITIES FOR COLLABORATION BETWEEN FOREST AND CHEMICAL INDUSTRIES**

The forest sector has extensive infrastructure dedicated to collecting and transporting biomass to a central location, followed by primary and secondary transformation to products for the building and printing industries. Forestry operations are increasingly sustainable and very little of the material collected goes to waste. As an example, waste is burned for heat and power, with the result that the forest sector has reduced its absolute greenhouse gas emissions to 44% below 1990 levels in spite of production increases of 20% in the same period.

However, the forest sector is an export-based industry, with over 80% of its products sold in US dollars outside Canada. The strong rise of the Canadian dollar, the decline in the demand for lumber in the US housing market, structural declines in the demand for newsprint in North America, and increased competition in the commodity pulp and paper markets from low-cost producers in developing countries has led to significant loss of jobs as Canadian sawmills and pulp and paper mills are shuttered. It is clear that the Canadian forest resource will remain available, and this, combined with existing forest sector infrastructure, provides the opportunity and the drive to identify new products from the forest. In particular, carbon-neutral, renewable substitutes for petroleum-based products will be of interest in a climate-challenged world.

This presentation will outline the structure of the existing forest sector from technical and economic perspectives, and will attempt to identify pathways to novel products of benefit to both the forest and chemical sectors in Canada.

### **BIOGRAPHY**

**Tom Browne** obtained his Bachelor's degree in Mechanical Engineering from McGill University, then completed a Master's degree and Ph.D. in Chemical Engineering, also at McGill University. His post-graduate studies focused on the deformation behaviour of paper sheets in a rolling nip.

In 1994 he joined FPInnovations, Paprican Division, working in the area of energy use in pulp and paper mills in general and mechanical pulping plants in particular. He was technical editor of monographs on energy and water use in pulp and paper mills. Recently he has led the development of a major new research network in the area of the forest biorefinery.

Dr. Browne has published articles in refereed journals on the topic of paper properties in calendaring, mechanical pulping processes and energy use. He has participated in a number of industry committees, in particular serving as chairman of the Energy Committee of the Pulp and Paper Technical Association of Canada. At Paprican he has been Program Manager, Mechanical Pulping since June 2001. In June 2004 he took on additional responsibility for the Sustainability and Forest Biorefinery portfolios.

