



Challenge: LCBA – Paper Excellence on Manufacturing of lignin-based packaging materials

Challenge Statement/Synopsis:

Fossil based packaging has become socially unacceptable with bans taking place with respect to single use packaging and expanded polystyrene foams.

The conventional foam market in North America is approximately 4 million tonnes with a majority in polyurethane and polystyrene foams.

An opportunity exists with respect to developing packaging materials derived from lignin, a by-product of the kraft pulping process.

Context for the Challenge:

Scientific evidence confirms that plastic pollution is pervasive in the environment. [Macroplastic pollution](#) is harmful to wildlife and wildlife habitat, and single-use plastics, such as checkout bags, and food and beverage service items, make up the bulk of macroplastics found on shorelines in Canada and internationally. Organisms can ingest or become entangled in macroplastics, which can result in direct harm and, in many cases, loss of life. Plastic pollution may physically damage habitats and transport non-native species to the area, which could transmit diseases to wildlife and possibly lead to a loss of biodiversity.

The ***Single-use Plastics Prohibition Regulations*** were made under the authority of the *Canadian Environmental Protection Act, 1999* (CEPA), following the addition of [“plastic manufactured items” to Schedule 1](#) of the Act in May 2021. The decision to add “plastic manufactured items” to CEPA was grounded in the findings of the [Science Assessment of Plastic Pollution](#).



Response Criteria:

Please provide the following information in your application/response form. Please ensure that you only provide non-confidential information.

- TRL
- Cost per volume
- Insulation values – Ideally within 20% as currently available petroleum-based versions;
- Similar cost (within 20%) as currently available petroleum-based versions;
- Are less flammable than petroleum-based versions;
- Are fully recyclable at end of life; and
- Would generate less (GHG) emissions during manufacturing

The Opportunity:

As part of the LCBA Canada program you may have the opportunity to:

- Pilot or deploy your solution with Paper Excellence, if your solution is selected and deemed suitable.
- Meet new customers and explore new markets for your solution.

About Paper Excellence:

The Paper Excellence Group is a private equity holding company that oversees individual pulp and paper business units. Its operations include the manufacturing of pulp and specialty, printing and writing, and packaging papers, producing over 10 million tons annually with a workforce of over 14,000 in its nearly 40 locations across the Americas and Europe.