

June 18, 2021

Reference: CEM Engineering Response to Sustainable Growth: Ontario's Forest Sector Strategy

- 1. We are responding specifically to the paragraph at the bottom of **Page 28**, entitled "**Maximizing the Use of Mill By-Products**", which literally, jumped off the page at us.
- 2. We are a thermal power engineering firm, based in St. Catharines, Ontario, specializing in the generation of heat and power and managing energy at point of use, with approximately 60 employees, with offices in St. Catharines, Oakville and Calgary.
- I am a Professional Engineer, licensed in the Province of Ontario, with over 40 years of experience in the energy sector. After a 20 year apprenticeship in thermal power with four (4) employers in Ontario, I started CEM Engineering in 2001.
- 4. One of our core competencies is biomass, that is, the use of biomass resources to produce heat and power, rather than the use of fossil fuels to produce the same amount of heat and power.
- 5. Having tried to develop biomass projects all over Ontario over the past 20 years, we whole heartedly applaud this initiative by the Province of Ontario. We can attest, from a firsthand perspective what the potential is for Ontario's biomass to reduce the use of fossil fuels and therefore reduce our CO₂ footprint.
- 6. The combustion of biomass to produce heat and power is proven and widely used around the world.
- 7. **However**, there is now also technology to convert biomass (and especially Mill byproducts) into a synthetic gas.
- 8. This "syngas" can then be used in **existing** boilers <u>instead of</u> natural gas.
- 9. This gasification of biomass technology has now been proven in Western and Central Europe, with many installations now in operation. There are <u>none</u> of these type of technologies in Ontario.
- 10. We would be more than willing to tell you about the biomass studies we have undertaken in the Town of Hearst; Renfrew County/Arnprior; Huntsville; Windsor; and Emo. In each of these studies, we have looked at the technical feasibility of converting local biomass such as wood chips, bark, sawdust and shavings into steam or hot water or hot oil, such that natural gas utilization was reduced.

- 11. To attract investment, there needs to be a long-term supply contract in place from the sources of the biomass, typically 10-15 years. This has been consistently difficult to complete.
- 12. Another challenge has been getting environmental approvals in place, but, with A-13 and A-14 now in place, this obstacle has been removed. We applaud those individuals who have led the effort to complete Regulation A-13 and A-14.
- 13. In conclusion, the opportunity for the Ontario Forest Sector to help industries and MUSH customers reduce their dependency on fossil fuels is staggering. If you would like us to make a presentation, with specific examples, we would be more than happy to do so.

Sincerely,

Martin Lensink, P. Eng. VP, CO₂ Reduction