Unsustainable          Unaffordable          Sustainable + Affordable
About Sustane

- Nova Scotia company that has developed and is now deploying disruptive technologies that deliver near complete separation and recycling of municipal solid waste (MSW)

- Technology is proven. European origins and full scale facility in Nova Scotia is currently in testing and start-up. Expect to be fully operating by Summer, 2019.

- Nova Scotia Department of Environment recognized the Sustane process as recycling/diversion

- Strong support and endorsement from Canadian Provincial and Federal Governments

- Sustane owns, operates in exchange for secure MSW supply at fee less than current gate/tipping fee
  - Easily scalable to 1,000 tons per day and beyond
  - Delivers MSW diversion levels around 90%
  - Flexibility in feedstock – can also consume organics and recyclables (existing single of multi-stream systems)
  - Flexibility in offtake - Biomass to fuel pellets, gasification or agricultural (assuming organics in)
  - Extraordinary greenhouse gas attributes

- Significant pipeline of projects, including Eastern USA
Near complete separation is a game changer

- NOT incineration
- NOT gasification

- Process makes clean fuel products and recyclable materials

- Processes are low impact, thermo-mechanical in nature (relatively low temperatures and pressures)
GHG lifecycle analysis (Chester, NS sized facility at full capacity)

**Lifecycle Greenhouse Gas - Net Impact**
(70,000 tonne/yr MSW, Sustane vs Landfilling)

- **Sustane fuels replace fossil fuels**: 62,073 tonnes/year
- **Recycling of materials**: 27,060 tonnes/year
- **Elimination of landfilling (CH4)**: 103,713 tonnes/year
- **Plant energy consumption**: 7,039 tonnes/year
- **Plant construction**: 155 tonnes/year
- **Net annual CO2e reduction**: 185,651 tonnes/year

Equivalent cars permanently removed from roadways = 41,256
The breakthrough...  Separation → Purity → VALUE

Sustane’s clean biomass and diesel

- Clean biomass fuel
- High efficiency combustion (> 2x)
- High value

Previous best biomass fuel from MSW

- Dirty fuel
- Low efficiency combustion
- Low value
Chester commercial facility

- 70,000 tonne per year capacity
- MSW supply secured (20 years+)
- Broke ground Q2 2017, start-up Q2 2019
- Equipment procurement and installation complete
- 25 Employees (many higher skills)
- Energy self-sufficient (25% of plastic derived diesel)
- Pellet offtake signed
- Diesel offtake secured
Chester commercialization project
Equipment (4)