



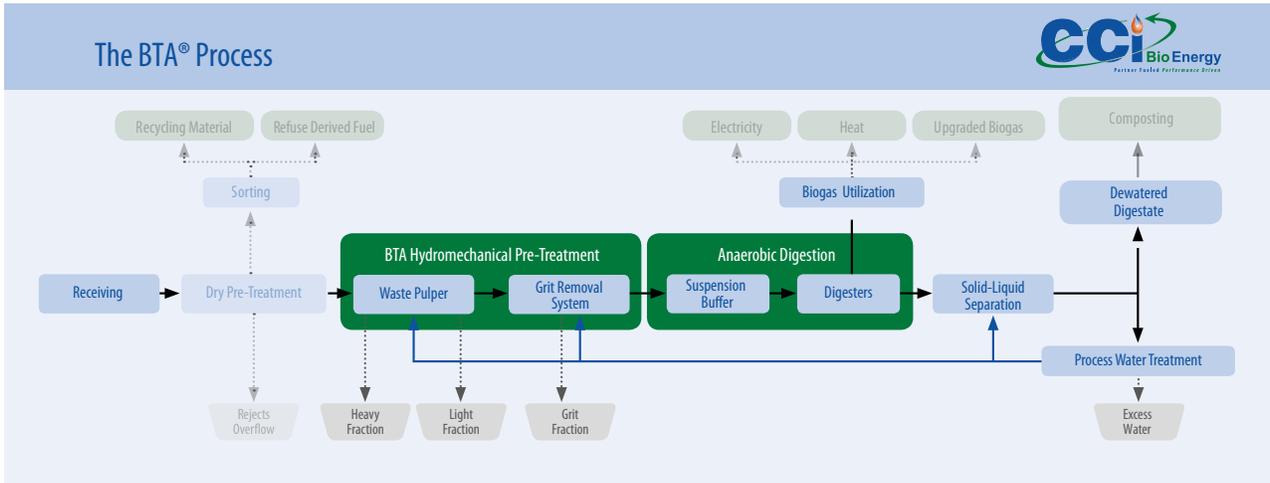
TORONTO DUFFERIN - Canada



Selected CCI References

- Owner:** • City of Toronto
- Operator:** • CCI BioEnergy Inc. and Partners
- Waste Type:** • Residential Source Separated Organic Material (SSO)
• Commercial Food Waste
- Initial Capacity:** • 25,000 metric tonnes / year (initial design)
• > 30,000 tonnes / year (actual)
• Operating on 2 shifts, 5 days per week
- Start Up:** • September 2002
• With the Green Bin Program start-up
- Delivered Systems:** • Waste receiving
• BTA® Hydromechanical Pre-treatment
• One-stage wet anaerobic digestion
• Solid-liquid separation
• Internal process water management loop
• BTA® Process Control System
- Capacity Expansion:** • Doubling to 50,000 metric tonnes / year
• Second digester installed – August 2012
• Upgrade to the biofilter – June 2012
• Second pulper to be installed - In 2013





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Project Highlights

The Toronto Dufferin Organics Processing Facility (DOPF) was **designed and built by CCI and its partners** and has been performing successfully every day since September 2002. As the **processing cornerstone** for the City of Toronto Green Bin Program, the daily operations have always been led by the CCI team.

The **consistent results and reliable operations** have birthed an expansion plan to double conversion capacity to 50,000 metric tonnes annually. In August 2012 a second digester was started-up, signifying the completion of the first step in the plan. In 2013 a second pulper will be added to fully **maximize biogas production** from the 8,800 m³ of digestion volume.

The waste feedstock, which is characterized by a high plastic content due to the collection in plastic bags, is directly fed to the **BTA® Hydromechanical Pre-treatment system** without any prior treatment. The anaerobic digestion methodology implemented is a one-stage **wet digestion process in the mesophilic range** with full mixing using compressed biogas.

The biogas will be used in a manner most beneficial to the community. Opportunities include cogeneration to produce electricity and heat and upgrading to natural gas quality (“biomethane”) to offset purchases and produce vehicle fuels. The digested solids will be aerobically finished at an off-site facility. Due to the virtually non-existent inert contamination, the finished compost will be distributed into **local, high-value markets**.

A broad acceptable waste profile, combined with the ability to use plastic liners, helps drive a greater than **90% residential participation rate**. The unique capabilities of the BTA® Process will help Torontonians annually divert and convert more than **125,000 metric tonnes** when a second BTA footprint starts-up in 2013.