



Reducing Emissions, Reusing Biomass, and Recycling Old Ways

Titan Clean Energy Projects Corp. is Leading the Way to a Carbon-Smart Future

AS THE WORLD shifts towards clean energy, many have attempted to make their mark in history by providing new, earth-friendly innovations. One Saskatchewan-based company is doing just that, by using activated charcoal products to replace harmful wastes with renewable solutions.

Jamie Bakos, President and CEO at Titan Clean Energy Projects Corp. said the company saw a need to divert a massive amount of waste that was going to landfills. Many companies perform work related to plastic recycling and metal recycling, but there is often no consideration given to biomass – organic matter that is used as a feedstock to produce valuable products.

“We had to initially identify the problem that needed to be solved, which is biomass waste,” Bakos said. After identifying what technology was needed to process biomass, he realized there really wasn’t much available to address this issue. Titan developed its own technology

to process biomass into products that were in high demand, and good for the environment.

Since he and his business partner Michele Kiss created the company back in 2008, they have since grown to a 20-person operation. “We are now one of the largest dedicated biomass recycling processors in Canada,” said Bakos.

The company has grown incrementally, adding more equipment over the years including excavators, loaders, and biomass grinders to scale up the business. They even built their own research and development lab on site in Craik. Bakos said they process more than 10 million kilograms of waste biomass into activated carbon and other advanced biomaterials.

Titan has created several activated charcoal-based products across a variety of markets including odour adsorption, water

purification, soil amendments, veterinarian products, and health and beauty ingredients. “We use certified feedstock sources with no herbicides and pesticides applied to them, and also produce the organic certified bio-charcoal for agriculture,” Bakos said.

Titan’s activated charcoal has been approved for organic input by the Centre for Systems Integration (CSI), which was a difficult undertaking. “It was very challenging to go through and get all the approvals through Health Canada and the Canadian Food and Inspection Agency and we were met with a very extensive process and we’re very proud that we went through that process to get to where we are today,” he said.

During their start-up phase, the company reached out to potential customers to find out what their product needs were, and how they

could recycle biomass to meet them. “It was a very complex process to work with customers very early on, in hopes of tailoring products to their specific needs,” Bakos explained.

He added that the company initially began by converting biomass waste to more simple household products like colored mulch, or industrial absorbents for the oil and gas industry. The question he faced was: How can we take these waste solutions to the marketplace, and see our products realized in the real world?

One of the first clear applications for Titan’s activated charcoal products was for veterinary use. “The activated carbon itself absorbs odors and pollutants,” Bakos said. “So, when using antibiotics and other things within an animal, the charcoal product absorbs things that are damaging to the gut health of the animal. There might be some toxins in the animal or maybe some infection. The charcoal can absorb those toxins and then travel through the animal and ultimately end up as nutrient-enhanced fertilizer for the soil.”

The ability of these activated charcoal products to absorb and eliminate contaminants is not its only attribute. It can also be used to create plastics and other fibres. “We are solving pretty big problems because there’s so much plastic waste, but so little is able to be recycled, reused, or regenerated,” he added.

Titan is developing answers to these growing problems. About two and a half years ago, the organization was awarded a project through Innovative Solutions Canada (ISC) to develop what is ultimately one of the first biodegradable plastics designed for single use

that also has a negative carbon footprint.

“We worked on a project with Next Generation Manufacturing Canada (NGEN) and Refined Manufacturing Acceleration Process (ReMap) to develop facemasks from biodegradable plastics, and then that extended to other filtration materials and just a wide range of materials in general,” Bakos said.

Titan is currently focused on expanding their facility, with about 25 acres left to go. “We want to expand until we reach about \$50 million in annual revenue,” Bakos said, “We want to use our proprietary technology and business model to build at new locations, both nationally and internationally.”

The company has identified more than 100 different sites in North America that could use access to a waste processing site, rather than transporting it to another location at an added cost.

“There’s a huge network in the clean technology, biomaterial, and carbon sequestration markets. So, we’re part of a very large community, and we have many research collaborations not only in Canada, but also around the world. We see the need to install our technology globally.”

Titan has been increasing marketing efforts to reach a larger audience. From participating in trade-shows to speaking at global conferences, networking is an important part of the process. This past June, Bakos presented Carbon-Negative Plastics using Bio-based

Carbon in a Circular Economy at the Plastic Waste Free World Conference in Atlanta.

Bakos said STEP conducted an initial market assessment for the business that was very valuable and provided great geographic and marketing information. “We also just did

“Titan intends to divert as much biomass as possible and create valuable new products from organic matter.”

a global export training program with Export Development Canada (EDC), Royal Bank and other partners. STEP was a big part of that program as well. It’s been a great relationship over the years,” he said.

With the amount of positive feedback, they have been receiving, along with the level of interest being generated in carbon sequestration technology, it seems Titan has ensured a strong position in the global market for years to come.

“This project has really validated the fact that it’s possible to do good things for the environment and still generate revenue,” Bakos said. The Titan team features some of the nation’s most talented people who are passionate about the environment and dedicated to providing carbon-smart solutions to everyday problems. For more information, visit www.titan-projects.com. 



BY MEGHAN HAUKAAS

“Our team is tenacious and dedicated.”

“Committed to the Environment. Committed to you.”