

## **Interim Status Report**

**April 24, 2018**

### **c2renew corporation**

The objective of the project is for a pilot scale operation to measure and validate expansion of c2renew corporations' production and development with existing collaborators; Bobcat Co., John Deere Co., Earth-Kind Inc. and Toshiba Corp., as well as new customers, Fargo 3D Printing, Intelligent Agricultural Solutions, Bogobrush, etc. The pilot facility will include a 75 mm twin screw extruder and ancillary processing equipment. With the previous support of the North Dakota Industrial Commission, c2renew corporation is positioned for growth and implementing a pilot scale operation will provide us the ability to measure production efficiencies, customer growth, job growth, rural development and innovation development in North Dakota.

With the scale up the focus is always on adding new production outlets, whether through our existing customer base or new customers. We have continued to expand our work with 3DFuel and grow that side of the business at 25% month over month. This has resulted in 3DFuel expanding their production capacity with plans to add two additional lines. They are also expanding into a larger space which we are co-locating with them to continue to broaden our product offerings.

The exposure we have received from developing the 3D printer filament has led to some interesting collaborations and development projects. We have developed custom material for a large beer brand that is printing custom beer coasters in bars this summer to highlight their sustainability efforts. This has led to us utilizing their waste stream which is a new market opportunity for them. We are also working with a large coffee brand on a similar project where we would be developing eyewear for them that would be used in a digital advertising campaign that will be highlighting their social and sustainable side of their business. We are also working with a large car company that is using our filament for custom developed components in the interior of the car that will be highlighted at a showcase in summer 2018. These are just a few examples of what the benefit of our collaborative development relationship with 3DFuel. It highlights how to ND companies can utilize local resources (i.e. biomass) and develop new products that can get national use and recognition.

In addition to the work we have been doing on the filament side of the business our material development for injection molding and sheet extrusion has also been just as busy. Some of our very early partners have started to expand their production capacities which is a testament to the foundation that was built in our early projects. Bogobrush is a prime example of this. They are currently expanding their production capacity from a single cavity tool that could 10s of thousands of brushes to now moving to 100s of thousands of brushes. We are currently formulating materials for 3 new product SKUs that will be launching in summer of 2018.

In addition to Bogobrush we are also expanding our work into packaging and have started working with a company that has developed a hemp package brand. We are currently supplying Sana Packaging with more than 20,000 lbs of material each quarter. This is a example of an

opportunity to build our ND's infrastructure to include growing and processing hemp. For the work we are doing with Sana and other companies we will acquire more than 50,000 lbs of hemp feedstock. However given we do not have hemp being grown and processed in ND we have to source it from Kentucky.

We also continue to provide engineering services to a broad number of partners that are in ND as well across the US. We have had a hand in helping to launch over 7 products that we have helped design, test or develop material for. We are continue to with these brand partners and have 4 more products in are engineering services que throughout the Q2-Q3 that we will be working on...ranging from journals made from recycled wood waste, retail displays from cotton, speakers, modular furniture and aerospace components.

To help to sustain the growth and work we are doing we needed to add an additional oven that dries down the biomass so we are able to keep up with the demand while we wait to get our larger dryer installed in our new facility this summer. In addition to that we have continue to rely on our great team to do double duty as both production and technical engineers that can wear multiple hats.

As we've outlined in the report we continue to work toward the expansion goal and as part of that we continue to grow both in production, customer base, equipment and space. As part of this report and previous we continued to expand each of these areas by making targeted trips to customer's locations and trade show to grow our potential customers. We have also purchased some scaled equipment that will help to mitigate some production bottle necks when drying biomass. Lastly, we have continued to expand our production and office space to facilitate the grow...at the inception of the project we were in a shared double office and then expanded to a space that could house 10-15 people. We also added production space that put our square footage to just around 9,000 sq ft.

To accommodate the next phase of growth we are moving everything into one space that approximately 15,000 sq. ft. This will prepare us to bring in the remainder of the equipment we had specified to reach the production output we anticipated.