

From: Morton Bailey [mailto:lghbailey@gmail.com]
Sent: Thursday, June 16, 2016 9:47 AM
To: Bernstein, Barbara
Subject: Re: Dry Chips

Hi Barbara. Below are my answers to your questions.

- No governing body to insure consumer protection

Who governs wood pellets? What kind of "teeth" do they have?

The Pellet Fuels Institute. In order to be a PFI certified mill you must meet the PFI Premium Grade Standards. This is accomplished by have twice monthly unannounced inspections and product testing. If the product is found not meet PFI standards the mill could have their PFI certification pulled. PFI has a list of approved testing agents to preform this inspection and testing. This procedure is new in the last 3 years. Prior to that mills tested independently and could call their product PFI grade with out any outside testing and inspection and in turn the public did not have a real way to know if the product met the grade standard.

- No dry chip standards and specifications or independent testing procedure or policy related to storage and handling

What is the equivalent for wood pellets?

I cover part of this in the previous answer. BETEC has worked with manufactures, installer and delivery company's to establish documents detailing best practises for storage, handling and delivery of wood pellet fuel. I suspect the PUC is familiar with this after the pellet storage off gassing ordeal.

- Green chips can meet emissions requirements by adding addition exhaust filters. Adding dry chips to the program may encourage other types of biomass "want in" and this could set precedent for them to be included. This could become a slippery slope for the PUC
- The PUC has already given rebates for wood pellet systems that never burned a pellet and immediately started burning dry chips. Other pellet boiler systems have been switched to dry chips.
- Cost related to installing chip systems are higher due to more complicated storage and handling. This in turn uses more funds for few projects.

Do you have any sense of how much more these systems cost?

Not being an installer of chip boilers I cant put a \$ amount to it, but I do know that "dry chip" (green chips are 50% moisture and dry chips are 30%) MUST be storage in conditioned space so they do not freeze. You can not convey chips with vacuum so augers and floor sweepers are required to move the chips for bin to boiler.

- The PUC has recently awarded a grant to one company working on developing dry chips. The PUC has not given any bulk pellet delivery company specific money but instead created an appliance program to help grow the delivery industry. Adding dry chip to the program is basically taking PUC funding away from those bulk delivery company's
- The PUC spent months of research and development to create the Bulk Fuel Fed Wood Pellet Boiler and Furnace Program, so inclusion of another fuel should require a complete review of the program, its criteria and administration. Adding dry chips will chew away at the growth of the bulk pellet delivery market in its time of need.
- The public already confuses Green Wood chips and pellets. The wood pellet central heating market is still young and does not need to create more confusion related to the fuel. We also do not need bad press from a new product that may experience some growing pains.
- Having two very different fuels included in one program will create conflicting opinions of what fuel is the better fuel
- PUC program was designed to grow the bulk wood pellet delivery market and the commercial/municipal wood pellet market creates an anchor for the residential delivery market. Burning of chips of any kind will never happen in the residential market and will never have a residential delivery market.
- Different biomass fuels sell for different prices and in turn have different ROI on equipment and installation. Program criteria has been set based on system cost and fuel cost, this ratio will not necessarily work when applied other types of biomass boilers and biomass fuels

Bulk pellet delivery company such as LGH have invested substantial money and time into starting, growing and establishing bulk delivery to both residential and commercial customers in NH. These company's, including ours, are not yet profitable. If we have to start competing with chip fuel that will be pulling rebate funding away from bulk pellet systems we will quickly loose the momentum we have been working so hard for. Residential bulk pellet delivery is even less profitable then the commercial delivery's, so our commercial business allows us to continue building the residential markets and serve the NH citizens that have made a sizable investment in a bulk fed wood pellet system. If the PUC starts to openly rebate chip systems bulk delivery

companies will have to start competing with perceived lower cost fuel (with no governing body insuring the customer is getting what they paid for, water weight based on moisture content will not be independently tested) this will in turn drive down our margins and have a very negative effect on our ability to operate in the existing market. Adding chip systems to the program (at the same time as the rebate is proposed to be increased) and then awarding grants to the same company producing the chips and installing the system is picking winners and loser's. We need get one fuel source and distribution market established before moving onto another.

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Sent: Wednesday, June 15, 2016 9:57 AM

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Subject: Dry Chips

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