

## Wuvio: keeping dust under control during the biomass handling process



All over the world more and more of energy production is generated by biomass conversion. Biomass has become an important substitute for other types of fuel such as coal, and has its place in the energy transition. Although biomass is seen as a more 'clean' fuel looking at its footprint, it has similar problems when it comes to dust generation during handling. This is true whether it's woodchips, pellets or other types of biomass, during the process of handling, preparing and upgrading the fuel to be able to be used in the conversion facilities.

With every step in the process of handling, shredding or screening of biomass, dust is generated. Prolonged or repeated exposure to fine biomass dusts has an effect on workers' health: biomass dust is a human carcinogen<sup>1</sup>. Dust emissions can travel for miles and possibly affect the direct surroundings and community. Besides the impact on the direct surroundings and community, a lot of biomass is lost during handling. Wuvio's years of experience in the field of dust suppression has led to the development of different solutions to deal with biomass dust.

### FOAMING

This is a technique used for inline treatment with increased active duration up to 30 days. Applied with compressed air,



a very dry and thick foam curtain can be created with a minimum of water usage and low moisture levels, thus not influencing the (calorific) value of the biomass. Foam can be used by adding it to the flow on conveyor belts or adding into the shredder when preparing the biomass.

### HUMIDIFYING

This is a technique used to make water more effective for usage in closed (production) warehouses. The easiest way of making the dust particles heavier is to make them wet. Wuvio achieves this by adding a wetting agent to the water that is sprayed, atomized or sprinkled. The advantage is that the amount of water can

be reduced significantly and material moisture levels can be reduced.

### AGGLOMERATING

This is a technique that binds fine dust particles to the bigger particles and can be used for a single point application. The product has a double effect due to its 'stickiness'; while suppressing the dust, it also can increase the bulk density of the biomass.

### WUVIO SOLUTION

- ❖ easily mixes and can be used with various qualities of water;
- ❖ has no effect on the aquatic environment;
- ❖ can be applied with standard nozzles and sprinklers; and
- ❖ has no effect on the quality of the biomass.

### ADVANTAGES

- ❖ more than 90% dust reduction;
- ❖ save more than 80% on water;
- ❖ reduced dust during full supply chain;
- ❖ single application point;
- ❖ bulk density increase;
- ❖ 100% biodegradable and harmless to the aquatic environment; and
- ❖ 100% safe for people and environment.

<sup>1</sup> According to the International Agency for Research on Cancer