**To Understand Why Used Railroad Ties
Should Not Be Burned in Power Plants
Start Here**

**The People of Madison County
Are Already Suffering**

Madison and Franklin County governments each permitted a biomass power plant to be constructed within the last few years. The promise was Georgia Renewable Power was going to be a good neighbor, producing clean, renewable energy, and large tax revenues. However, since both plants came on line, they have produced soot and foul-smelling emissions, unbearable noise, and chemical-filled storm water discharges into our rivers and streams. They are burning wood from construction waste and chemically treated railroad ties. Naphthalene (mothballs) and coal-tar creosote are two of hundreds of chemicals in the emissions from these plants. The area residents have experienced increased among other things, cases of respiratory illnesses, massive fish kills, and beehive depopulation.

**The reason why there are extreme physical reactions to these plants is, through loopholes and deregulation of EPA standards, biomass plants are legally permitted to be more polluting than coal plants. Yet the trend toward biomass plants is growing, with the industry targeting rural, cash-poor communities.** The Madison County Clean Power Coalition, in conjunction with Franklin County, and the Blue Ridge Environmental Defense League (BREDL) are working to **stop permitting, in the state of Georgia, the burning of railroad ties, other chemically preserved wood waste. HB 857 is addresses one part of the problem: the prohibition of burning railroad ties as fuel in biomass plants.**

**Even If Power Plants Are Well Managed
Railroad Crossties Still Create Problems That Can't Be Fixed**

**Georgia Renewable Power (GRP) has grossly misrepresented the facts to politicians and area residents regarding the “safety” of burning railroad ties. We can document this assertion.**

First, GRP steadfastly maintains that only 6% of the creosote in crossties is still present after twenty-five years of use. The truth is we have no idea where their number comes from. **The peer-reviewed, scientific literature contains studies of used crossties from a dozen countries and every part of the rail network from switch-yards to mountain passes.** None of these studies indicate that less than 50% of the creosote remains after twenty-five years, and most find roughly 75% remaining. The Railroad Tie Association and the EPA provide figures similar to ours. **There are roughly 15 pounds of creosote per crosstie.**

**Second, GRP steadfastly maintains that, when crossties are burned in a power plant, all the creosote is destroyed by the high temperature of the flame. It is difficult to measure the amount of creosote emerging from the smokestack of a power plant.** However, GRP's applications to burn construction and demolition wood (2015) and creosote-treated crossties (2018), contain estimates that their plant will emit 45 tons per year of all kinds of volatile organic compounds combined. In their 2019 application to burn other kinds of crossties, GRP estimates 179 tons. Nothing changed except the method they proposed to use to measure the gases. To measure creosote is even more difficult. Creosote consists of thousands of different compounds. The most common of them is usually naphthalene, but even naphthalene is only 3% of a typical sample of creosote. Measuring a compound that would reveal the presence of creosote is extremely difficult, and it appears GRP cannot back up its estimates.

**We know of only one study in the peer-reviewed, scientific literature that attempts to describe the amount of creosote that might escape from the fire in a power plant boiler.** That study was done in a laboratory on small samples of creosote-treated wood. The samples were burned under conditions comparable to those in a power plant and all the escaping gases were collected. An estimate of the amount of creosote in the stack gases of a power plant may be made from this data by correcting for loss of creosote over time and using GRP's own estimate of the effectiveness of their oxygenation catalyst for destroying creosote. **Using real data, we find GRP's own model of dispersion in the atmosphere to contain unacceptable concentrations of creosote in the ambient air as far as fifteen miles from the plant.**

Finally, GRP reassures us that the plant is constantly monitored for pollutants. This is confusing to us because GRP/Veolia does not have plans to monitor the stack gases or ambient air for any compound that would be expected from creosote.

**GRP Circumvented the EPA's Intention**

The Environmental Protection Agency's 2016 rule permits power plants designed to burn both biomass and fuel oil in normal operations to burn crossties. The short interpretation of the EPA's rationale for the rule is this: Fuel oil is by far the most polluting of the traditional fuels. Crossties are more polluting than any other traditional fuel, but less polluting than fuel oil. Accordingly, it makes sense to allow biomass plants that co-fire with fuel oil to burn crossties which help to stabilize the flame temperature the same way fuel oil does. **This is permitted under the EPA's “contaminant legitimacy criterion” which requires new fuels to be less polluting than the traditional fuels they replace.**

When GRP applied for permission to burn crossties, their plant was equipped to burn fuel oil, and the Georgia Environmental Protection Division granted the permit. However, GRP was originally permitted to burn clean wood and natural gas, not fuel oil. They simply decorated their boiler with fuel oil nozzles which they are unlikely to use because the crossties will stabilize the flame temperature. **Viewing the entire scope of the change, GRP has substituted a more polluting fuel for a less polluting fuel in violation of the EPA's contaminant legitimacy criterion, an unintended consequence of their 2016 rule.**