



THE COLEBROOKDALE RAILROAD PRESERVATION TRUST

Empowering People Through Preserving Heritage

REQUEST FOR PROPOSALS TO ELECTRIFY RAILBIKES AND RAIL SPEEDER

Purpose: To widen access to recreational use of Colebrookdale's historic rail line through nature while eliminating polluting emissions and noise.

Summary: The Colebrookdale will accept, until 4:30 PM on August 15, 2021, proposals from local educational institutions in one or both of two categories, *Project Component A: Electrifying the Colebrookdale's Railbike Fleet*; and *Project Component B: Electrifying a historic rail speeder*

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Project Component A: Electrifying the Colebrookdale's Railbike Fleet



Figure 1. The Colebrookdale's railbike program was the first in Pennsylvania. We are seeking a project that will add electric motor assists to the bikes to expand their utility and the universe of people capable of using them.

The Colebrookdale Railroad has purchased a fleet of railbikes—people-powered rail vehicles. The railbike program has been a huge success commercially – all of our excursions are selling out and we are adding more. However, we are

finding two serious problems with our railbikes:

The general quality and durability of the bikes is; we are spending too much time repairing them after each run.

The average guest is not able to pedal them uphill. We are going downhill now for 4 miles or so, then bringing everyone back in our “doodlebug” and towing the railbikes back.

There is considerable “off the shelf” technology available to electrify pedal bikes, but none that can be readily adapted to our fleet. We can make one of our railbikes available in late October when our season ends, and provide funding for parts if your school would like to devise an electric-assist for one. We can also make limited sections of track available, with prior arrangement, for testing. We would need a production prototype available for the season in March. The Colebrookdale has funding available for parts needed for the project.

Project Component B: Electrifying a Historic Rail Speeder



Figure 2 We seek to convert to battery power a historic rail "speeder," a self-propelled, 4-wheel vehicle formerly used in maintenance of way service.

The Colebrookdale owns a self-powered inspection car called a “speeder.” Historically, a speeder was used to inspect rails and conduct maintenance work. Today, speeders

have largely been replaced by trucks outfitted with railroad wheels. The Colebrookdale’s speeder is currently powered by a very loud air-cooled gasoline engine. As with all speeders of this vintage, the engine is noisy, emits noxious fumes, and is difficult to maintain. With the recent and rapid development of battery and motor technology, replacing this engine with a battery-electric drivetrain would be a huge improvement. A quick search of the internet indicates that while there are hundreds of speeders in use but no one has electrified one.

The Colebrookdale can make limited sections of track available, with prior arrangement, for testing. We can make the speeder available as soon as we have an accepted proposal, and we would like to have the first testing completed by December with the new powertrain and instrumentation. As you can see, the speeder has a trailer for transportation. The Colebrookdale has funding available for parts needed for the project.