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## Electric Rubber Tire Gantry Cranes

### Georgia Ports Authority

The Georgia Ports Authority (GPA), as a leading advocate of environmental stewardship, is implementing an electric rubber tire gantry (RTG) crane program that will transfer the entire RTG fleet to electric power. This will virtually eliminate the diesel fuel usage for these machines and reduce the terminal's diesel emissions. This cutting edge technology, built to a GPA design, is the first electric RTG (eRTG) installation at a port in North America.



GPA has invested over \$17,500,000 constructing the first three phases that allows a total of 45 eRTGs to operate. Upon completion of the 12-phase program over the next 10 years, the entire fleet of 169 machines will have full electric capability.

This milestone project increases capacity and productivity in an environmentally responsible way. The eRTGs use 95% less diesel fuel than conventional RTGs with corresponding reduced diesel emissions for improved local air quality. Further, this project presents a robust business case – diesel is decreased by over 3 million gal/year for a net savings of over \$9 million dollars while providing a strong, positive environmental message to the community and customers. The annual reduction in CO<sub>2</sub> is almost 70 tons at full build out in 2026. The business case is further reinforced when combined with maintenance reduction costs, bringing a total savings expected to eclipse \$11 million per year.

The eRTG project is unique and innovative, and a model others can follow to work together for a common goal to reduce energy usage and diesel emissions. Project partners include Konecranes, Inc., Georgia Power, Electric Power Research Institute (EPRI) and Conductix-Wampfler.