

The background of the entire page is a photograph of a port. In the foreground, there are many colorful shipping containers stacked in rows. In the middle ground, a large red container is visible. In the background, several yellow and blue port cranes are visible against a blue sky. The right side of the image has a large blue triangle overlay.

# ROCSYS

Autonomous charging

## WHITE PAPER

# Hands-Free Charging for Port Operations

[www.rocsys.com](http://www.rocsys.com)

# Electrification 101: The Definitive User Guide to Autonomous Charging for Port Operations

With 90% of all goods transported via ship, ports are an essential component of the global supply chain. Unfortunately, they also make up a sizable percentage of greenhouse gas emissions and can contribute to poor environmental and health conditions for near-port communities. In recent years, several new state and federal guidelines have been aimed at lowering emission levels at ports. One such example is the Clean Air Action Plan, or [CAAP](#). The Port of Long Beach has committed to zero-emissions port operations by 2030 and has already taken numerous steps to reach that goal, including a [sizable investment in electric vehicles](#) for port operations.

After shore power for ships that dock, investing in an EV fleet is one of the best ways ports can reach their emissions goals, but as more ports turn to electric vehicles to streamline operations, there's one critical step that's often overlooked: charging! EV fleets need reliable and safe charging systems to keep vehicles running smoothly in service and port operations.

To keep up with the increasing demand for electrified fleets, Rocsys has developed a hands-free charging solution that improves efficiency and safety for port operations while easily integrating with current EV charging technology.

## The Hands-Free Solution for EV Charging at Ports

At Rocsys, we have developed a hands-free charging platform that delivers a truly seamless charging experience. Through a combination of cutting-edge vision technology and soft robotics, the Rocsys autonomous charging system handles the charging of electric vehicles for you. Simply pull your vehicle up and let the charger take care of the rest.



# How Hands-Free Charging Benefits Ports

Port operations see numerous benefits with the integration of a Rocsys hands-free charging solution into their charging processes:

## ⚡ Higher throughput:

Hands-free charging increases vehicle readiness, operators don't have to unbuckle and get out of the vehicle, trip or accidentally run over charging cables, or struggle to line up the plug with the socket; reducing downtime and improving throughput.

## ⚡ Workforce:

Operators and other port personnel are no longer troubled by the responsibility of plugging and unplugging vehicles. Removing the charging of port vehicles.

## ⚡ Safety:

Removing human intervention from the charging process improves safety for workers and reduces the potential for accidental injury or equipment damage.

## ⚡ Support:

With the Rocsys API, managers can easily monitor charging times, collect data, and take manual control over the charging process.

## ⚡ Compliance:

As port operations strive to meet new state and federal emissions standards, hands-free charging can help meet those goals through scalable EV fleet support.

## ⚡ Standardization:

The hands-free charging platform is design agnostic and can integrate with all standard EV chargers such as CCS.



# How is hands-free charging already transforming port operations?

Port operations can see numerous benefits with the integration of a Rocsys hands-free charger into their charging processes:

## Taylor Machine Works, Inc.

Rocsys has partnered with Taylor Machine Works, Inc., a leader in the design and manufacture of Zero-Emissions Container Handlers, to offer robotic charger deployment for the second-generation Taylor ZLC electric container handler.



## Our Shared Goals:



### Reduce Vehicle Downtime:

Reliable charging keeps vehicles in service at all hours, increasing efficiency.

### Increase Equipment Longevity:

Hands-free charging reduces wear and tear on cables, equipment, and vehicles.

### Streamline Labor Needs:

Personnel are not required to manually plug and unplug charging equipment, thus reducing labor needs and mitigating potential safety issues between personnel and charging equipment.

## Hyster

Rocsys will deliver a hands-free charging system for use with zero-emission Hyster Terminal Tractors, with the possibility to extend to other Hyster electric trucks.



## Our Shared Goals:



### Improves working conditions:

Hands-free charging eliminates the need for workers to handle charging equipment and helps support zero-emissions electric vehicles, improving indoor air quality for workers.

### Increases Efficiency:

Hands-free charging increases efficiency and uptime for port operations.

### Prepares for future EV projects:

Helps make the transition to electric vehicles easier, while supporting scheduled and opportunity charging in operations.

# More resources

There's a lot to consider when investing in charging for your EV fleet, but thankfully there are plenty of resources available to help guide you through the process.

## EPA's Ports Initiative

EPA's Ports Initiative provides information on resources, best practices and funding opportunities for the port industry.

## Terminal Tractor Electrification Fact Sheet

Read more about the benefits of electrified terminal tractors in port operations.

## Case Studies on the Port of Seattle and Port of New York and New Jersey

See how the Ports of Seattle and the Port of New York and New Jersey are reducing emissions and improving environmental conditions.



# Contact Rocsys

Interested in learning more about how hands-free charging can benefit your port operation? Drop us a line at [info@rocsys.com](mailto:info@rocsys.com) or schedule a [meeting](#), and our team will be in touch shortly.

[www.rocsys.com](http://www.rocsys.com)