

RAYMOND
ENERGY ⚡ SOLUTIONS





The Energy of Things

Complete energy solutions, working together to power your operation now and for the future.

The Raymond Corporation prides itself on providing energy solutions that take you from today's needs to tomorrow's goals. That's why we offer a full portfolio of complementary solutions designed to work together, and share data to enable optimization over time. Then we back our solutions with consulting and support, applying our deep expertise to help you optimize not only your energy solutions but also your entire facility. It's a holistic approach we call the Energy of Things.

Contents

Power Solutions.....	06	Support Services.....	20
Material Handling Equipment.....	14	Sustainability.....	24

A Legacy of Innovation

Raymond's commitment to pursue new and better methods, solutions and technologies drives everything we do. From the first narrow aisle reach truck to advancements in energy, ergonomics and connected technology, innovation is our legacy. **We will never stop exploring** new ways to move your business forward.

Power Solutions

Purpose-built for Your Raymond® Fleet

Optimized power solutions from lift truck experts.

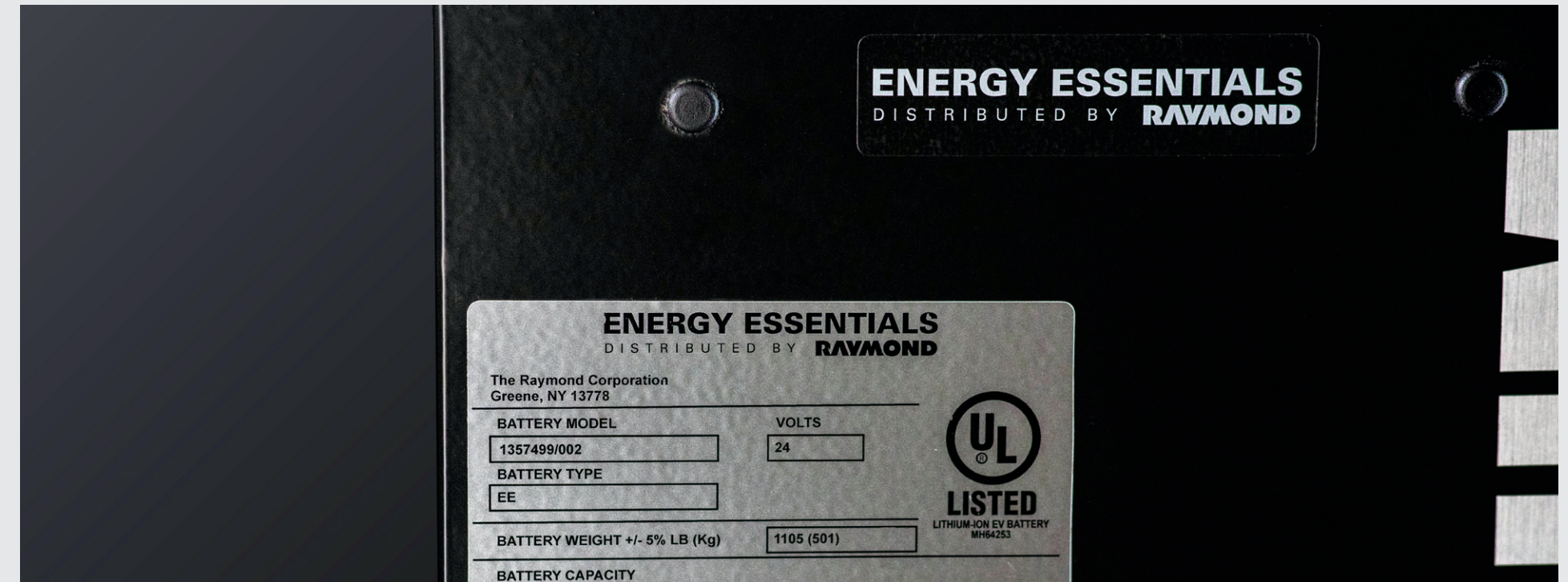
Forklifts are the root of our business. We know their needs, inside and out. That means we're uniquely positioned to engineer power sources that maximize lift truck performance. It also means we know there isn't one solution that works for every application in every business, so we offer a comprehensive range.

Whether you're seeking the latest lithium-ion technology, wanting to explore the benefits of an alternate energy source or considering how energy solutions can help meet your sustainability goals, we'll help you evaluate and implement the best power solution for your fleet and your business.



Unparalleled Battery Testing

In partnership with NY-BEST, each Raymond battery undergoes a series of tests to ensure it can stand up to the rigor of material handling applications.



UL Listed for Safety

Raymond proudly offers one of the few UL listed nickel manganese cobalt (NMC) battery chemistries available in the market, providing assurance that its batteries meet nationally recognized safety standards.

Designed to integrate seamlessly into our family of forklifts.



Lithium-ion Batteries

Our PSI (Power Source Integrated) lithium-ion batteries enable continuous data exchange between the Raymond® lift truck, battery and charger. This data sharing provides full visibility into the battery's state of charge, fault codes and necessary maintenance in real time. With a higher energy density in a smaller footprint, our batteries deliver more power and increased run-time between charges.

Suitable for a variety of environments, Energy Essentials distributed by Raymond lithium-ion batteries offer an impressive array of benefits while meeting industry safety and performance standards.

For greater efficiency, superior capacity retention, faster charging, increased runtime and more, our lithium-ion batteries are a reliable, low-maintenance power solution. And while they may have a higher upfront acquisition cost, lithium-ion batteries typically have a much larger return on investment over their lifetime.

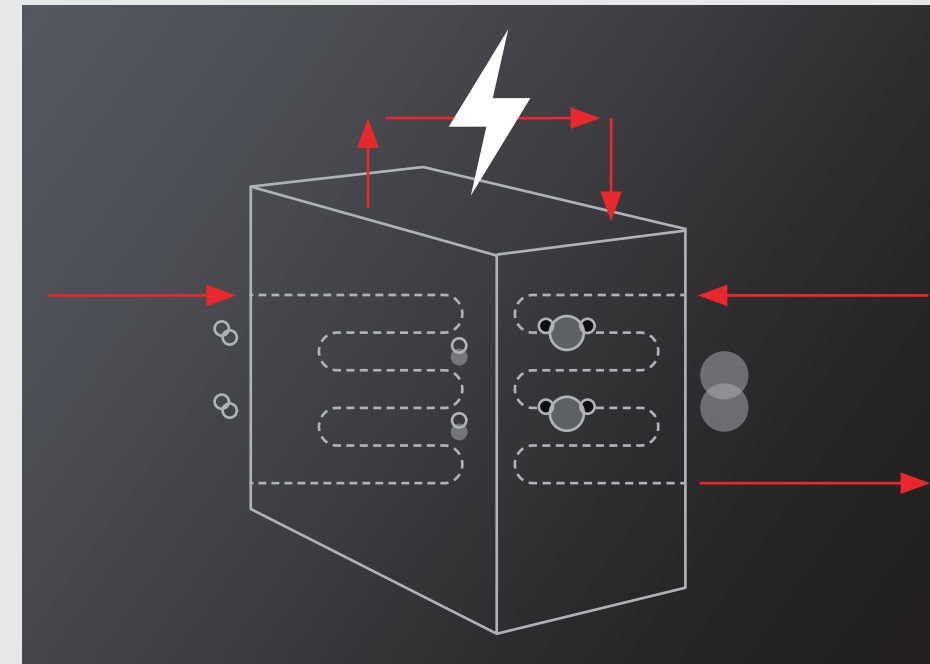


Industrial Lead Acid Batteries

A proven energy solution offering flexibility, durability and effective operation, lead acid batteries from Raymond withstand harsh conditions, offer a lower acquisition cost and can operate effectively within a variety of applications.

ADVANCED LEAD ACID BATTERIES

Thin plate pure lead (TPPL) batteries offered by Raymond provide high discharge and charge rates; a longer life span; better efficiency; and faster charging than traditional batteries.



Hydrogen Fuel Cells

Highly scalable and effective even in cold-storage environments.

Chargers and Charging Technologies

Products to enhance your efficiency.



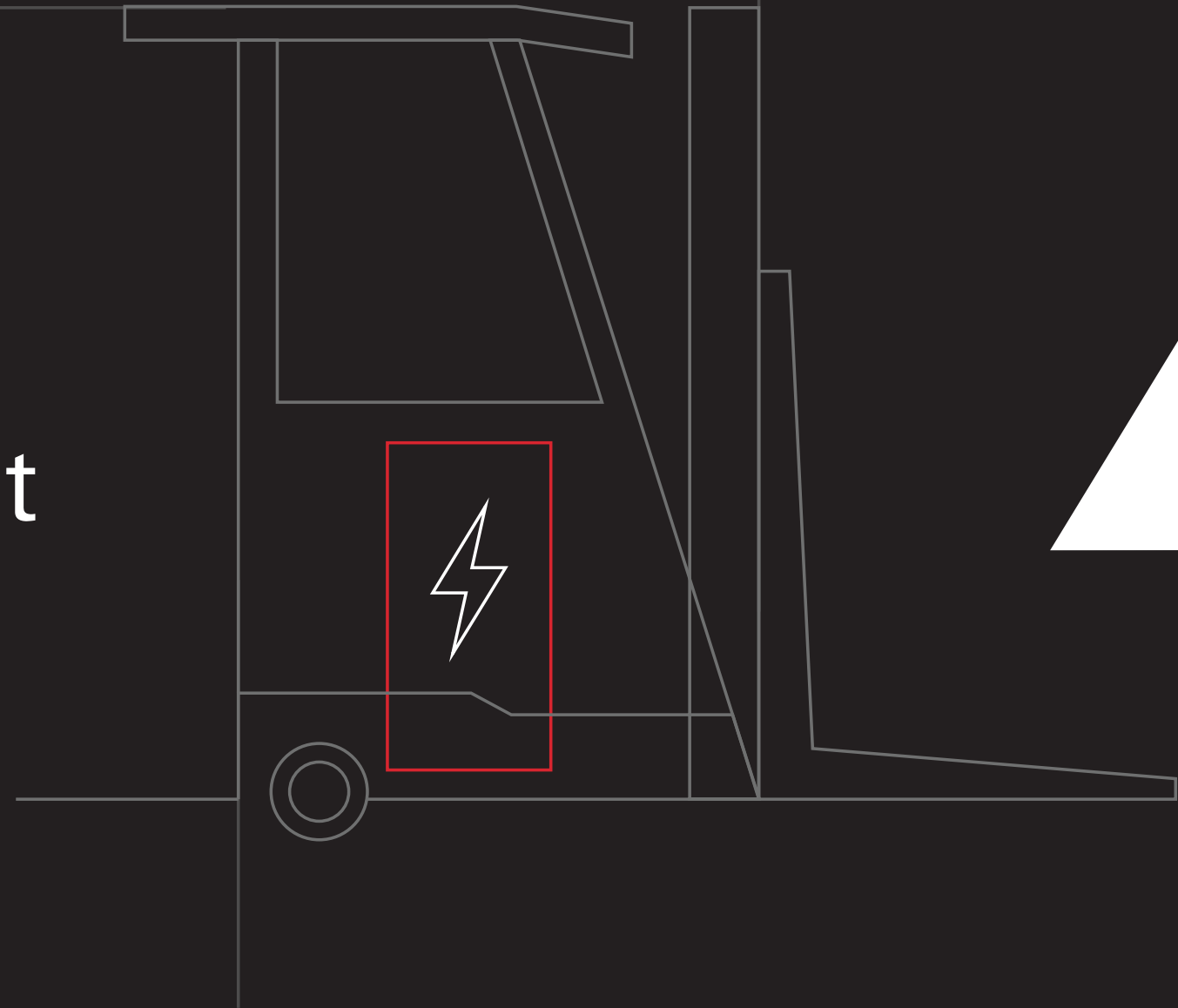
Battery Chargers

We offer a variety of chargers for every material handling environment, budget and battery type. This includes conventional as well as automated and wireless chargers; dedicated fast- and opportunity-charging systems; and CEC-certified universal chargers that charge both lead acid and lithium-ion batteries — backed by the industry's only six-year standard warranty.

Automated and Wire-free

With conventional charging comes expensive cables, connectors and contactors — not to mention lost productivity. Stay lean and eliminate downtime with automated and wireless charging options that offer ease of use, flexible integration, cost savings and added safety along with the option to charge while the equipment is in use.

Material Handling Equipment



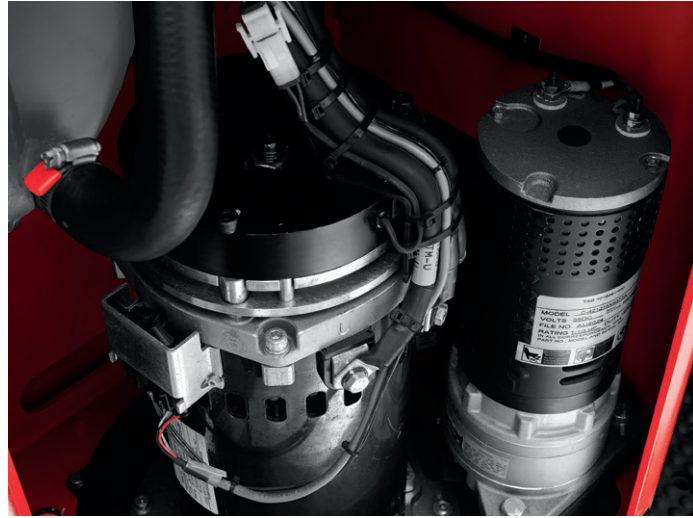
Do More Work With Every Charge

Our lift trucks are engineered to optimize energy, run longer and recharge quicker, no matter how you power your fleet.

Raymond designs and manufactures equipment that helps you work more efficiently. To that end, many of our lift trucks are built with light, yet strong, composites to reduce energy consumption. From energy and sustainability to ergonomics and space utilization, our innovations can be found across the complete line of lift trucks.

Less Is Best

Fewer charges means reduced carbon emissions, maximum ecological benefits and greater energy savings.



Regenerative Technology

Achieve more work cycles per charge with our regenerative braking and lowering technology, which allows lift trucks to recapture much of the truck's kinetic energy. That energy is converted into electricity that can be used to recharge the batteries.



ACR System™

Our advanced ACR® motor control system delivers faster lift and lower speeds, quick acceleration and smoother directional changes. That means operators can move more pallets with fewer battery changes and greater energy savings for a lower total cost of ownership.

Designed, Engineered and Manufactured for Eco-performance

- Efficiency that lowers your energy costs
- Sustainability that reduces your carbon footprint
- Performance that enhances your productivity and throughput
- Durability and reliability at a lower total cost



We connect advanced technologies with flexible and intelligent warehouse solutions to provide you with visibility across your entire organization.



iWAREHOUSE® Fleet and Warehouse Optimization System

This portfolio of intelligent warehouse solutions enables you to get the most out of your operations, including your energy solutions and management. With telematics within our portfolio, you can gather data about your energy solutions to truly understand and optimize them for greater efficiency, productivity and ROI.



iBATTERY™

Whether integrated within iWAREHOUSE or as a stand-alone system enabled with Wi-Fi, iBATTERY enables data-driven battery management of your lead acid battery, providing key statistics to help you maximize efficiency, prolong battery life, increase uptime and reduce costs.



Power Source Integrated (PSI)

A power system-agnostic interface, PSI enables data liberation for both lithium and hydrogen fuel cells. PSI-enabled trucks and battery systems report 12 unique performance metrics through the iWAREHOUSE GATEWAY™ for visibility that helps you get the most from your power source.



Energy Asset Manager

Advanced technology in this cloud-based system allows you to access your power system's performance data from anywhere in your facility, allowing for proactive energy asset management to reduce downtime.



Support Services

Support and Expertise for All Your Energy Needs

Our experienced consultants will provide service and support across your entire portfolio of energy solutions.

Consulting

A SINGLE PARTNER FOR MULTIPLE SOLUTIONS

As a total intralogistics solutions provider, Raymond understands how every lift truck, technology and solution needs to work together. From lift trucks to automated guided vehicles, operator assist technologies and robotics, Raymond is a single partner with a breadth of knowledge of multiple warehouse solutions.

Identify. Integrate. Optimize.

Our experienced technicians will assess your energy infrastructure and lift truck fleet to identify, integrate and optimize the right energy assets and control systems for your unique needs. We'll help you maximize forklift uptime so you can focus on managing your operations.



Raymond Lean Management

Through our proven lean management process, we'll show you how to identify inefficiencies and make changes designed to improve workflows and save you time and money. We begin every engagement with a detailed review of your operation to understand your unique goals and identify the root cause of challenges you face. That way, every recommendation we make is designed specifically to enhance your operation.

Power Study Program

We'll gather data representing the full picture of your energy consumption and usage in your lift trucks to ensure you are operating with the correct solutions for your unique needs. We'll help you identify the best energy solutions at capacities right sized for your operation, recommend chargers and strategize charger installation and lift truck parking options.

Energy as a Service

Avoid the upfront capital investment of lift trucks and batteries and save time and effort by leaving energy and equipment management to us. We'll take care of battery run time and warranty issues, charger and charging issues, regular inspections, water level checks, temperature monitoring, and data collection while leveraging our deep expertise to manage the energy support needs of your operation, helping you achieve maximum uptime and efficiency while you focus on running your business.

Lift Truck Maintenance

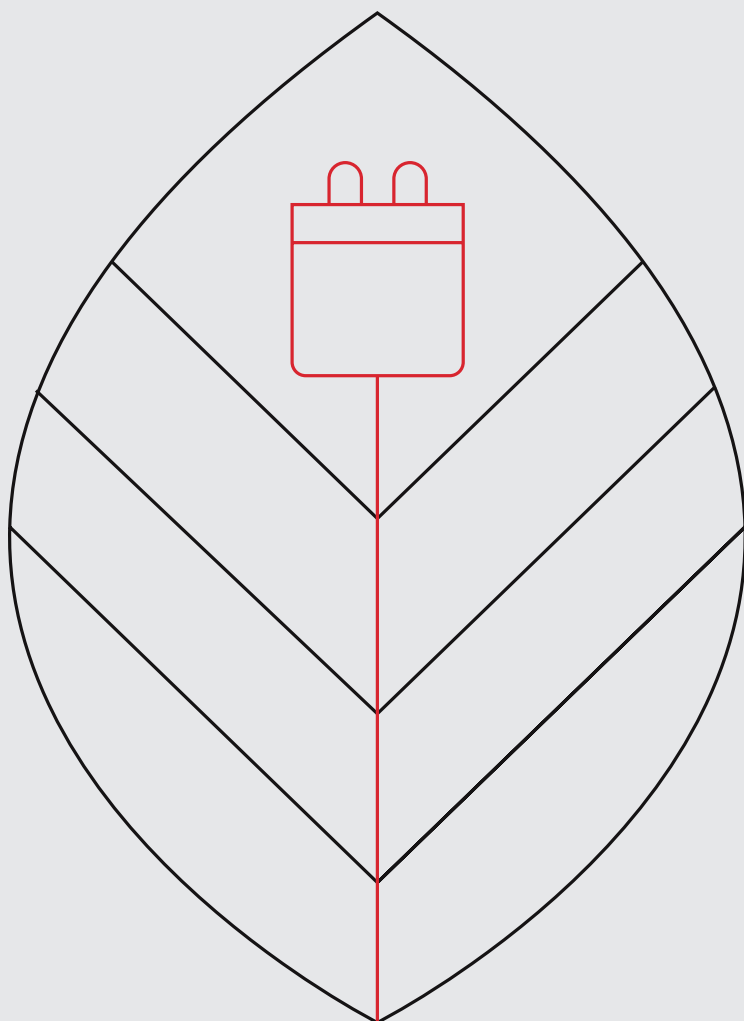
Our comprehensive fixed-price maintenance plan provides you with an experienced, certified Raymond technician who performs scheduled maintenance and makes any necessary improvements on your lift trucks. These planned sessions allow lift trucks to stay in operation when needed, helping you reduce downtime and increase overall productivity. The fixed price means there's no need to allocate dollars for unexpected maintenance needs.

Raymond Leasing

All Raymond Energy solutions can be financed via our captive leasing company, Raymond Leasing. This provides customers with attractive financing options that help to facilitate the transitions to new energy technologies.

Lead Acid Battery Service

Your lift trucks need reliable power. Our Solutions and Support Centers can help keep your lead acid batteries up and running with battery service as well as ongoing consulting, data analysis and expertise to help you get the most from your power solutions.



Sustainability

We strive to reduce our impact on the environment and yours.

We're passionate about fostering a sustainable future for our own communities and our world. That passion comes through in our products and services and inspires our goals, values and business practices.

Products Designed to Make a Difference

As a manufacturer of lift trucks and power solutions, we have a significant opportunity to reduce the environmental impact made by our products. That's why all Raymond products are manufactured from materials that are designed to be recycled and reused. This means that, at the end of their useful lives, Raymond lift trucks and batteries can be repurposed.



G2 Solar Project

In partnership with Binghamton University faculty and New York State Energy Research and Development Authority (NYSERDA), we are developing a new energy storage process and solution that uses solar panels, a stationary energy storage system and lithium-ion forklift batteries to reduce energy costs for facility owners.

The project will turn warehouses into controllable energy hubs that can be optimized to supplement the power grid during normal and peak operations.

Phase 1, completed in 2020, included installing a 200-kW photovoltaic (solar) system and battery energy storage system at our facility in Greene, New York.

Phases 2 and 3 will develop and demonstrate the installation of advanced charging technology and lithium-ion batteries when used in conjunction with Raymond forklifts. This gives your operations the ability to demonstrate cost savings during peak demand charging using renewable energy resources.



RAYMOND
Restored Products

Rebuilt and refurbished for
a lower-waste fleet.



Raymond RENEWED™ Electric Lift Trucks

As part of our commitment to reduce, reuse, recycle and recover, pre-owned Raymond lift trucks are reconditioned to exacting specifications and delivered as energy-efficient units able to provide a long service life, backed by a 30- to 90-day warranty. It's how we make the best possible use of valuable resources and equipment.



RayBuilt® Rebuilt Parts

We operate an extensive program for rebuilding and remanufacturing lift truck motors and transmissions, thereby increasing reuse of valuable resources. Our RayBuilt remanufactured lift truck parts provide a sustainable and affordable alternative to new equipment — built to the same quality criteria as factory-authorized Raymond parts and rigorously tested and inspected.



Greene Hydropower

Our manufacturing plant in Greene, New York, uses hydropower from nearby Niagara Falls, which provides a clean fuel source that minimizes CO₂ emissions. Other Greene initiatives include automated zoned and controlled lighting and temperature; sustainable packaging; and recycling of over 90% of production materials and byproducts.



Lighting Reduction and Water Reuse

To further reduce our carbon footprint, the Greene facility uses LED lighting systems and occupancy sensors to eliminate wasted lighting. To fulfill utility water requirements, we use reclaimed water from our powder-coat paint system.



All in the Family

Our complete family of material handling equipment and power solutions is engineered with sustainability in mind — made to help you use energy more efficiently, reuse energy when possible, recycle materials and reduce waste.

From power solutions and material handling equipment to connected technologies, consulting and support services, we're a partner helping you achieve your sustainability goals.



The Raymond Corporation Sustainability Initiatives

Raymond, a subsidiary of Toyota Industries Corporation (TICO), abides by the TICO Environmental Action Plan:



Establishing a carbon-neutral society

Taking on the global challenge of establishing a zero-CO₂-emissions society.



Establishing a recycling-based society

Committing to minimize the use of resources.



Promoting environmental management

Enhancing environmental management systems to promote continuous improvement activities and enhancing environmental performance in accordance with ISO14001 principles.



Reducing environmental risks and establishing a society in harmony with nature

Committing to be an environmentally responsible neighbor in the communities where we operate.



RAYMOND
INTRALOGISTICS SOLUTIONS

End-to-Endless Solutions for Your Business

Raymond's energy offerings are part of our end-to-endless intralogistics solutions — a unique mix of innovative products, best-in-class methodologies and software-based, data-powered solutions that work together to help you achieve your goals.

Learn more at www.raymondcorp.com/products/energy-solutions