

Energizing the World with Intelligent Sustainable Solutions

*Advanced Battery Energy Storage, EV Charging
Infrastructure, and Intelligent LED Lighting for Commercial,
Industrial, Institutional, and Public Sector Organizations.*



ABOUT RADIANCE ENERGY

Radiance Energy helps organizations reduce energy costs, strengthen energy resilience, and prepare for an electrified future. We specialize in delivering advanced Battery Energy Storage Systems (BESS), EV charging infrastructure, and high-performance LED lighting solutions that improve operational efficiency while supporting long-term sustainability goals.

From initial assessment through engineering, procurement, installation, and ongoing support, our turnkey approach simplifies complex energy projects while maximizing long-term value. Whether reducing peak demand, enabling fleet electrification, providing backup power, or lowering facility operating costs, Radiance Energy delivers reliable, future-ready energy solutions designed for lasting performance.

OUR SERVICES



BATTERY ENERGY STORAGE SYSTEM

We design and deliver customized Battery Energy Storage Systems that help organizations reduce peak demand charges, improve energy resilience, provide backup power, integrate renewable energy, and support facility electrification. Every solution is engineered to maximize operational performance, reliability, and long-term return on investment.



INTELLIGENT LED LIGHTING

We provide scalable Level 2 and DC Fast Charging solutions for commercial fleets, workplaces, municipalities, multi-family developments, and public charging networks. Our charging infrastructure is designed to integrate seamlessly with Battery Energy Storage Systems, enabling higher charging capacity while minimizing grid impacts and costly electrical upgrades.



EV CHARGING

Our advanced LED lighting solutions significantly reduce energy consumption while improving lighting quality, occupant comfort, and maintenance costs. Integrated controls and smart lighting technologies help organizations optimize building performance and achieve long-term energy savings.



Battery Energy Storage Solutions

INTELLIGENT ENERGY STORAGE FOR A MORE RESILIENT FUTURE

Radiance Energy designs and delivers advanced Battery Energy Storage Systems (BESS) that help organizations reduce operating costs, improve energy resilience, and support the transition to electrification. Our turnkey solutions are engineered for commercial, industrial, institutional, municipal, and utility applications where long-term reliability and operational performance are essential.

Every project is customized to the facility's unique energy profile, integrating seamlessly with existing electrical infrastructure while maximizing long-term value through intelligent energy management.

Smarter Energy Management

Our Battery Energy Storage Systems optimize energy flow across multiple power sources to improve efficiency, reduce peak demand, and increase operational flexibility. Integrated with:

- Utility Grid
- Battery Energy Storage
- EV Charging Infrastructure
- Solar Power
- Wind Power
- Backup Generators

Our Vision for a Sustainable Future



We envision a future where clean, resilient energy powers every community, business, and facility. At Radiance Energy, we make that future possible by delivering intelligent Battery Energy Storage Systems (BESS) that improve reliability, reduce costs, and accelerate the transition to electrification.

KEY FEATURES

Engineered for Long-Term Performance

Unlike conventional battery systems designed for short service lives, Radiance Energy's advanced Battery Energy Storage Systems are engineered as long-term infrastructure assets.

Turnkey Project Delivery

From feasibility studies and engineering through procurement, installation, commissioning, and ongoing optimization, Radiance Energy manages the complete project lifecycle.

Modular & Scalable

Flexible, rack-based architecture allows systems to scale from individual facilities to large multi-site and utility-scale deployments while supporting future expansion.

WE ARE SPECIALISTS IN NON-LITHIUM ENERGY STORAGE

Often referred to as the "Swiss-Army knife" of the energy transition, Battery Energy Storage Systems (BESS) are multi-functional, increasing the efficiency of various sources of power such as hydro and solar by storing energy during off-peak hours, and providing it to customers during peak hours.

NICKEL- HYDROGEN BATTERY

The Nickel-Hydrogen Battery is a next-generation metal-hydrogen battery technology initially developed for NASA and now adapted for commercial energy storage applications. It is recognized for its ultra-long lifespan, high cycle durability, and enhanced safety features, making it a compelling alternative to lithium-ion batteries for grid-scale storage.



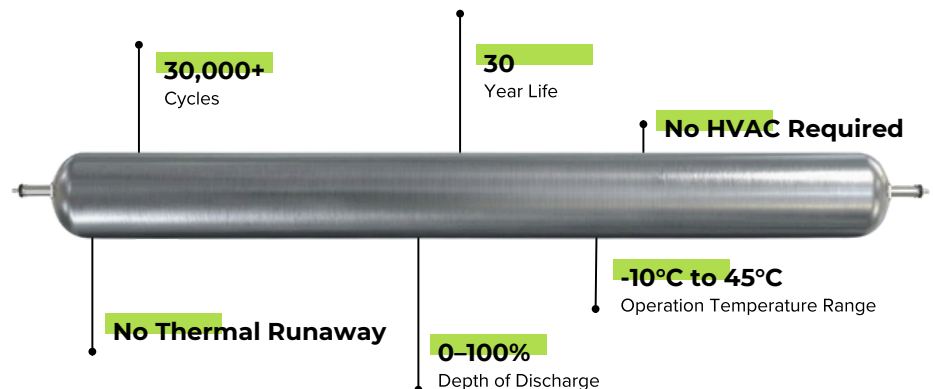
OPERATIONAL CAPACITY:

NiH₂ batteries can safely use 100% of their capacity, reaching 0 V on discharge and without overcharge damage on recharge. Lithium batteries require a 10–20% safety margin at both charge and discharge, limiting usable capacity to 60–80% of their rated energy.

DESIGNED FOR DIVERSE APPLICATIONS

Radiance Energy Battery Energy Storage Systems support a wide range of industries, including:

- Commercial Buildings
- Industrial Manufacturing
- Municipal Infrastructure
- Educational Campuses
- Healthcare Facilities
- Greenhouses & Agriculture
- Ports & Marine Operations
- Transportation Hubs
- Fleet EV Charging
- Data Centres
- Multi-Family Developments
- Utility & Grid Support



BENEFITS OF RADIANCE ENERGY'S (RE) BATTERIES VS. STANDARD LITHIUM BATTERIES

Recyclability

01

- RE Batteries: Fully recyclable, promoting sustainability and reducing waste.
- Lithium Batteries: Limited recyclability, more environmental impact.

Operation Time

03

- RE Batteries: 4–12 hours of reliable operation, offering extended use.
- Lithium Batteries: 2–4 hours of limited operation.

The Critical Advantage! Safety

Radiance Energy's batteries deliver unmatched installation flexibility. They can be placed next to buildings, stacked, or set side by side — ideal for commercial use. Unlike lithium batteries, which require at least 6 feet of spacing and setbacks from buildings, RE batteries save valuable space. Smarter, safer, and more efficient, they simplify installation and maximize your options.

Fire Safety

02

- RE Batteries: Non-flammable, installable near buildings and side by side.
- Lithium Batteries: Flammable, require setbacks and spacing between units.

Extended Lifespan

04

- RE Batteries: 5 to 7 times longer lifespan.
- Lithium Batteries: Shorter operational life, requiring more frequent replacements.



Fire and explosion risk

High operating & maintenance expenses

Incapable of longer duration & dispatch

Limited cycle life



Releases steam under pressure; suppression per building code.

No augmentation, Low routine maintenance

Flexible charge/discharge range C/2 to C/12

30+ year lifespan
~30,000 cycles, 3 cycles/day



Restrictions on over-charge and over-discharge

Harsh climates: hot deserts & freezing winters

Flammable liquids and toxic materials

High chemistry, adoption and technology risks



Excellent overcharge, discharge and deep-cycle

Technology warranted for -10°C to 45°C

Non-toxic, no lithium, easily sourced

Proven in 30+ years of use in space applications

Challenge with Lithium-Ion technology compared with advantage of Nickel Metal Hydrogen Battery technology

EV CHARGING INFRASTRUCTURE

**POWERING THE FUTURE OF
TRANSPORTATION**



Radiance Energy delivers intelligent EV charging infrastructure designed for commercial, industrial, municipal, institutional, and fleet applications. From workplace charging to high-capacity fleet depots and public charging networks, we design scalable solutions that support today's transportation needs while preparing organizations for future growth.

Our turnkey approach includes planning, engineering, utility coordination, installation, commissioning, and ongoing support to ensure every charging system delivers reliable, long-term performance.

Smart Charging Starts with Smart Energy

As electric vehicle adoption accelerates, many organizations face electrical capacity limitations, high demand charges, and costly utility upgrades.

Radiance Energy addresses these challenges by integrating EV charging infrastructure with Battery Energy Storage Systems (BESS), enabling higher charging capacity, improved energy resilience, and optimized energy management without unnecessary infrastructure expansion.

Building the Infrastructure for Tomorrow

EV charging is more than installing charging stations — it's about creating resilient, scalable energy infrastructure that supports long-term operational success.

By combining intelligent EV charging with advanced Battery Energy Storage Systems, Radiance Energy delivers future-ready solutions that enable organizations to electrify with confidence.

AC Level 1	AC Level 2	DC Fast Charge
		
 Voltage 120V 1-Phase AC	 Voltage 208V or 240V 1-Phase AC	 Voltage 208V or 480V 3-Phase AC
 Amps 12 – 16 Amps	 Amps 12 – 80 Amps (Typ. 32 Amps)	 Amps <125 Amps (Typ. 60 Amps)
 Charging Loads 1.4 to 1.9 kW	 Charging Loads 2.5 to 19.2 kW (Typ. 7kW)	 Charging Loads <90 kW (Typ. 50kW)
 Charge time for vehicle 3 – 5 miles of range per hour	 Charge time for vehicle 10 – 20 miles of range per hour	 Charge time for vehicle 80% Charge in 20 – 30 minutes

LIGHTING OPTIMIZATION PROGRAM: FROM AUDIT TO LONG- TERM SUPPORT



Phase 01

Audit

A senior auditor will visit your facility to complete an audit. We want to optimize your experience, energy savings, and provide other ideas for upgrading your lighting to be best equipped for current and future use.



Phase 02

Proposal

We take the time to formulate a proposal for each facility, including detailed information on the costs and potential energy savings, a Return on Investment model and light distribution studies for review.



Phase 03

Installation

We have certified professional installation teams across the country to ensure the site work is conducted efficiently and with as little impact on your day-to-day operations. We remove and recycle all products adhering to local regulations, and clean up all affected areas.



Phase 04

Inspection

Once the installation is complete, we will conduct a thorough inspection and provide product orientation and training for control systems. Where available, we will guide and assist in the rebate incentive applications until you receive the funds.



Phase 05

We Care

We will stay in touch. Our commitment to our clients is providing long-term satisfaction. We offer the longest maintenance options in the industry as well as comprehensive extended warranty programs.



BETTER LIGHT, BETTER LIFE

Poor lighting can negatively affect people's health and performance, causing eye strain, headaches, reduced focus, and lower productivity. Upgrading to LED lighting improves comfort, supports well-being, and enhances overall efficiency.

BENEFITS

- Motion-activated energy savings
- Daylight-responsive lighting control
- Tunable color temperature for well-being
- Circadian rhythm and sleep support
- Improved cognitive and mental health
- High CRI for visual clarity and comfort
- Fall prevention through glare-free lighting
- Integrated security and emergency lighting
- Smart dimming without loss of visibility
- Near-zero maintenance and remote diagnostics
- Long-term operational and energy savings
- Supports sustainability and environmental goals



Significance of Color Rendering Index (CRI)

The Color Rendering Index (CRI) measures how accurately a light source reproduces colors compared to natural light. A high CRI is essential for:



ACCURATE COLOR PERCEPTION

High CRI (Color Rendering Index) lighting ensures accurate color differentiation, which is essential for tasks that require visual clarity — from quality inspections and product selection to interior design and daily activities at home.



COMPLIANCE AND SAFETY

Proper color rendering enhances visual clarity in any environment, helping users identify details accurately, reduce errors, and create safer, more comfortable spaces — whether at home, in the workplace, or on the production floor.

ADVANCED LED LIGHTING SYSTEMS WITH INTELLIGENT CONTROLS

Lighting plays a crucial role in every environment, directly impacting comfort, safety, productivity, and energy efficiency. Radiance Energy's LED lighting solutions deliver superior illumination while minimizing energy use. By utilizing a precise color spectrum, our LEDs enhance visibility, improve color rendering, and closely mimic natural daylight — creating optimal conditions for living, working, and operating across a wide range of spaces.

Importance of High-Quality Lighting

Enhanced Visibility: LED lighting offers consistent, bright illumination that improves visibility and safety in any setting — from homes to warehouses.

Energy Efficiency: Consuming far less energy than traditional lighting, LEDs deliver immediate savings on utility bills and long-term reductions in energy use.

Reduced Maintenance: With a long operational life, LED fixtures reduce the need for frequent replacements, cutting down on maintenance costs and hassle.

