

Energizing the World with Intelligent Sustainable Solutions

SUSTAINABLE ENERGY SOLUTIONS: INVEST IN SAVINGS
WHILE POWERING YOUR HOME, BUSINESS, OR FACILITY



ABOUT RADIANCE ENERGY

Whether for homes, businesses, or industrial facilities, energy efficiency, reliability, and sustainability are essential. Radiance Energy delivers innovative solutions tailored to these needs — from advanced battery energy storage systems that optimize usage and ensure backup power, to intelligent LED lighting that enhances visibility and cuts energy costs. Our smart automation systems streamline operations, while our scalable EV charging solutions support the growing shift to electric mobility. With Radiance Energy, you can reduce costs, enhance operational efficiency, and support a more sustainable future. Our innovative solutions are designed to deliver lasting performance improvements while helping you meet today's energy and environmental goals.

OUR SERVICES



BATTERY ENERGY STORAGE SYSTEM

We specialize in expert consultation and custom-designed energy storage systems, focusing on safety, cost-efficiency, peak-shaving, and eco-efficiency, maximizing performance and achieving energy solution goals.



INTELLIGENT LED LIGHTING

Radiance Energy provides innovative LED lighting that cuts energy costs by up to 90%. Our health-focused solutions mimic natural light, enhancing well-being, efficiency, and reducing maintenance.



EV CHARGING

We deliver smart, scalable EV charging with fast charging, real-time monitoring, and seamless payment integration, ensuring a smooth transition to sustainable and efficient electric mobility for all applications.



WAVE & TOGGLE SYSTEMS

Radiance Energy's innovative WAVE & TOGGLE systems deliver smart automation, dynamic energy control, and real-time insights, empowering your operations to save energy, cut costs, and boost sustainability.



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 effected areas.



Phase 04

Inspection

Once the installation is complete, we will conduct a through 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

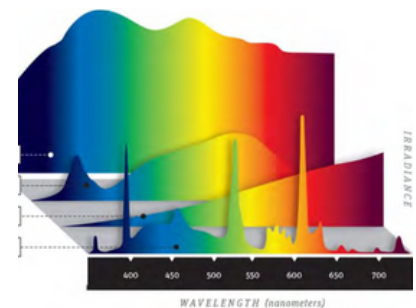
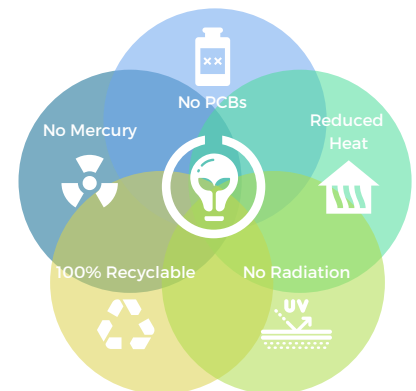
Lighting plays a crucial role in every environment, directly impacting comfort, safety, productivity, and energy efficiency. Radiance Energy's LED lighting solutions deliver superior illumination while minimizing energy use. By utilizing a precise color spectrum, our LEDs enhance visibility, improve 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.






POWERING THE SHIFT: EV CHARGING FOR HOMES, BUSINESSES, AND BEYOND

As electric vehicle adoption accelerates, installing EV charging infrastructure at homes, businesses, and public spaces provides valuable benefits:



- **Convenience and Satisfaction:** Providing easy access to EV charging supports residents, employees, and visitors, enhancing satisfaction and long-term engagement.
- **Sustainability Leadership:** Installing EV chargers highlights a strong commitment to reducing environmental impact and supporting cleaner transportation.
- **Future-Ready Infrastructure:** Building EV charging capabilities today ensures homes, businesses, and facilities are prepared for the continued growth of electric vehicles.

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



Advanced LED Lighting Systems with Intelligent Controls

Smooth and efficient operations rely on precise control over essential building systems such as HVAC, lighting, security, and energy management. Radiance Energy's smart automation solutions use advanced technologies to streamline these systems, reduce energy waste, improve occupant comfort, and maintain consistent performance. Our integrated approach enhances day-to-day operations while ensuring alignment with regulatory standards and long-term sustainability goals.

WAVE Smart Energy Solutions for All Spaces

BENEFITS OF BUILDING AUTOMATION

Energy Optimization:

Automated control of HVAC, lighting, and ventilation systems minimizes energy waste and lowers operational costs across homes, businesses, and industrial facilities.

Environmental and System Compliance:

Smart controls maintain precise temperature, humidity, and air quality settings, helping protect spaces, assets, and meet regulatory or best-practice standards.

Enhanced Security & Access Control:

Integrated monitoring and smart access solutions help safeguard properties while maintaining operational standards.

Remote Monitoring & Control:

Real-time oversight allows users to monitor and manage systems from anywhere, improving responsiveness and operational efficiency.

Predictive Maintenance:

Advanced data analytics detect potential issues early, preventing disruptions and reducing long-term maintenance costs.





Energy Storage Solutions

OUR SOLUTION

At Radiance Energy, we design and deliver advanced Battery Energy Storage Systems (BESS) that optimize energy usage, lower operating costs, and integrate seamlessly into commercial, industrial, and institutional facilities.

Built on over a decade of experience, our solutions combine innovation, reliability, and local expertise to meet the energy demands of today—and tomorrow.

We provide flexible and customizable energy management systems that seamlessly integrate and optimize energy flow across multiple sources. Our solutions ensure efficient, reliable operation tailored to each site's specific needs.

Multiple Battery Chemistry Options: Tailored solutions based on site conditions, performance goals, and budget.

Energy Optimization Across Sources:

- Solar Power
- Battery Storage
- Wind Power
- Generators
- Grid Systems

Our Vision for a Sustainable Future

We imagine a future where clean, sustainable energy is everywhere — powering homes, businesses, and communities. At Radiance Energy, we make that future real through smart solutions that deliver lasting impact.



KEY FEATURES

Made in North America:

Proudly manufactured in North America, ensuring exceptional quality, regulatory compliance, and support for local economic development.

Cybersecure by Design:

Thoughtfully engineered to meet the highest standards of cybersecurity, protecting system integrity, sensitive data, and operational reliability.

Modular & Scalable:

Designed with flexibility in mind, making it ideal for projects of any size.

Flexible Delivery Models:

Offering a range of delivery approaches, including fully turnkey solutions and customized Public-Private Partnership (P3) structures to fit diverse project needs.

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.



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

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.

WHY OUR BATTERIES ARE IN A LEAGUE OF THEIR OWN

	Operati on Time (Hours)	Lifespan (Years)	Maximum Lifetime Degrdaton	Round- Trip Efficiency	Depth of Discharge	Lifetime Performance Bonds	Levelized Cost of Energy (\$/kWh)	Degradation & Replacement Factored In?	High Value At End of Life
NonLithium LDES	2-12+	30+	3-12%	75-90%	100%	✓	\$	✓	✓
Lithium	2-4	7+	40%	90%	80-90%	✗	\$\$	✗	✗



SOLAR POWER INTEGRATION WITH BATTERY STORAGE

Implementing on-site battery storage systems — with or without solar integration — offers a reliable path to energy independence and long-term resilience. By reducing reliance on traditional power grids, these systems help stabilize energy costs and provide uninterrupted power during outages. This is especially valuable for homes, businesses, and facilities that rely on consistent lighting, climate control, or automated systems to maintain comfort, protect assets, and ensure continuous operation.

- ✓ **Cost Savings:** On-site solar energy reduces utility expenses, leading to long-term financial savings.
- ✓ **Sustainability:** Solar adoption cuts greenhouse gas emissions, supporting corporate environmental goals.
- ✓ **Energy Independence:** Reliable power supply mitigates outages, ensuring uninterrupted operations.
- ✓ **Flexible Installation:** Radiance Energy's space-saving batteries offer versatile placement options, unlike lithium batteries that require extra spacing.



THE BRIGHT MINDS BEHIND RADIANCE

5-90%

Typical Range of Energy Efficiencies Discovered

10+ Years

Experience In Energy Efficiency Upgrades

500+ Facilities

Facilities Improved Across North America

100,000

MWh Saved To Date



ROBERT ZIOLA

CEO & President



KARLA FRASER

General Manager



AMENEH MANI

Director of Finance



MATTHEW LITTLER

Business Development &
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Client Relation Quebec