



LIGHTING THE WAY IN SOLAR LED TECHNOLOGY

# Sales Proposal

Bristol RW603

March 7, 2024



## **Proposal for 5 RetroFlex Systems**

ClearWorld is pleased to submit this proposal for the sale of our advanced RetroFlex Solar LED Systems. We're confident the multiple applications and the associated benefits of our RetroFlex systems will far exceed other options being considered for new and existing projects. RetroFlex is an easy choice for our customers looking for immediate cost savings, favorable project economics, and improved safety through a sustainable, renewable solar lighting system.

ClearWorld can provide you and your team the support you need throughout the proposal process. We are available to meet and discuss product specifications with your engineering group, provide an independent ClearWorld cost-benefit analysis to support your financial review, and be on-site to discuss the installation process once the RetroFlex systems are delivered. We are confident that we can meet the challenges ahead and look forward to working with you now and in the future. If you have questions on this proposal, feel free to contact us at your convenience. We will be in touch with you next week to arrange a follow-up conversation on the proposal.

Thank you for your consideration,

Lexie Assunto  
VP of Business Development  
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lexie@clearworld.us

## Proposal Summary

ClearWorld is an alternative energy systems solution provider responsible for the creation of RetroFlex: a retrofit energy-efficient system that reduces utility operating and maintenance costs in pursuit of grid independence.

This proposal is for 5 RetroFlex system adds new LED off-grid solar power for Bristol's street lighting improvement while eliminating the need for conventional street lighting infrastructure.

### Benefits of RetroFlex New Installations:

- **Reduced costs and maintenance:** Installing the RetroFlex is an easy decision for any projects requiring new infrastructure or in lieu of replacing existing infrastructure. RetroFlex can provide you with up to 100% savings on recurring costs; it also eliminates the need for trenching and reduces costs for new infrastructure. It can also be installed to replace existing infrastructure to eliminate significant repair and replacement costs.
- **Reliability and Safety:** When the grid goes down, RetroFlex won't leave you in the dark, and it provides improved illumination to help reduce crime.
- **Environment:** ClearWorld's Retroflex eliminates the carbon footprint of traditional utility light poles.
- **Carbon Credits**
- **\$0 Energy Bill from Day One-** safeguarding against rising rates
- **Qualifies for ITC 48 Tax Credit:** 30% plus depreciation
- **10 year warranty**
- **Batteries rated for 15 years and Solar Rated for >25 years**

### ClearWorld Planning & Support:

ClearWorld coordinates site planning with the customer to ensure adequate lighting based on the customer's needs. ClearWorld provides shading analysis to the customer prior to any installations to ensure proper sunlight levels during all seasons and all-weather conditions. This shading analysis is conducted by ClearWorld at no additional cost to the customer.

## Proposal Pricing

The following table is an estimate of the basic RetroFlex system, pole and installation kit.

RW603	Cost per Unit	# Units	Total Price
RetroFlex Solar LED Off-Grid System (Model #RW4002475- OG) • 90W GAMA L LED fixture 14580 lumens 4K Type 3 • 6' tapered cap arm, 24V 90 AMP Hour Battery	\$6,153.00	5	\$30,765.00
26' Aluminum Poles 11" decorative base Four J-bolts, 18" x 3/4", eight 3/4" washers and nuts, ClearWorld bolt pattern.	\$1,537.00	5	\$7,685.00
Total Cost for 5 RetroFlex RetroFit systems			<b>\$38,450.00</b>

*\*Total Cost does not include any shipping, permitting fees, impact fees, or other fees that may be assessed for installation of each system. Prices based on pole not exceeding*

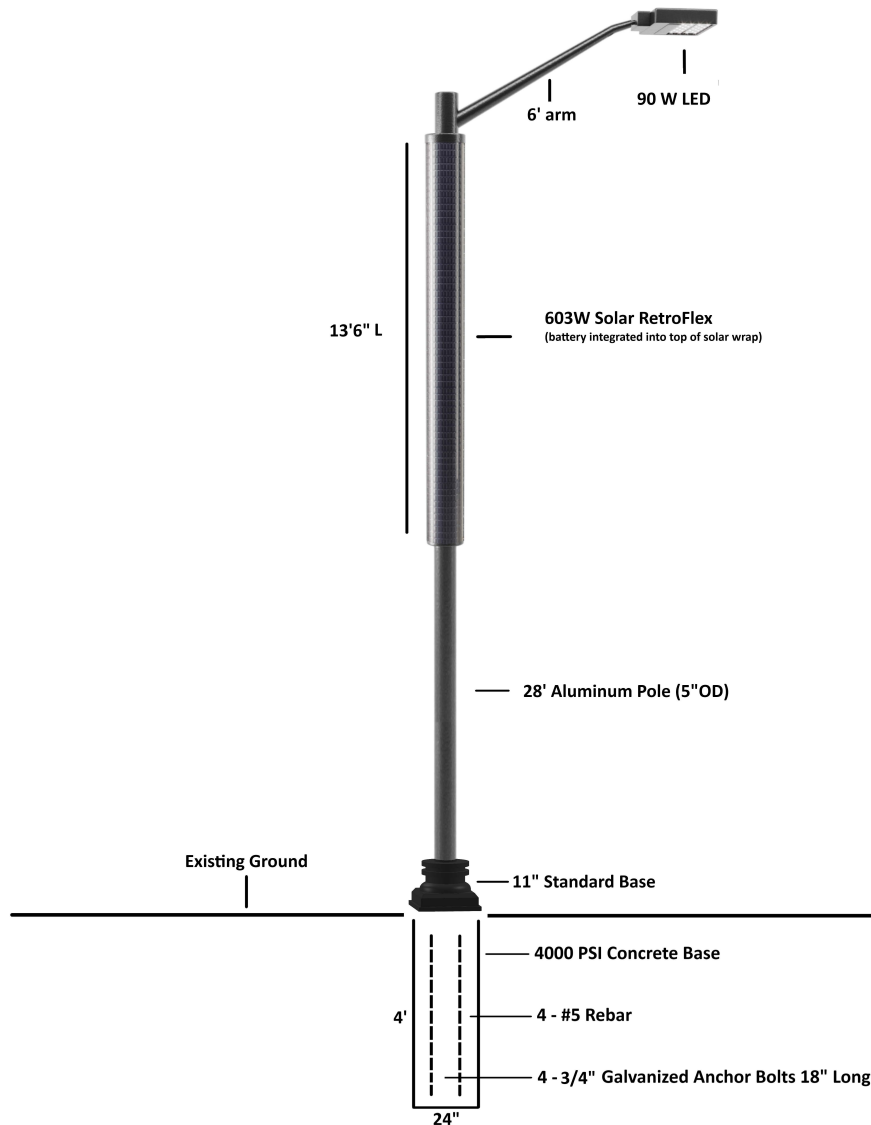
*5"OD for the RetroFlex's length. The Pricing for Systems does not include shipping and handling for delivery. All contract terms and conditions shall be mutually agreed to by the parties.*

**Payment terms:** 50% down payment to begin production. The remaining balance is due within 30 days from shipping.  
*Lighting as a Service - Lease to Own Financing Options Available*

*Ask about remote device management.*

**Lead Time- 75-90 from PO and 50% deposit**

## RW603 RETROFLEX SYSTEM



### COMPONENT SPECIFICATIONS RW6032490

SOLAR ARRAY	603W (13.6" IN LENGTH) WITH ADJUSTABLE ALUMINUM ARRAY
LIGHTING	90W LED MODULE @ 162 LUMENS PER WATT, DIMMABLE
BATTERY	24V - 90AH LITHIUM ION 1.8KWH (12+ YEARS LIFE EXPECTANCY)
CONTROLLER	ELECTRONIC MPPT SOLAR CHARGE CONTROLLER/REGULATOR
LIGHTING CONTROLS	BLUETOOTH MONITORING
EPA (SQFT)	20.13

## **Proposal – Product Details**

Applications - Roadway, pathway, commercial parking lot and area lighting.

<b>Specifications</b>	<b>RW603</b>
<b>Description</b>	Roadway 603
<b>Model #</b>	RW6032490-OG
<b>Hardware</b>	Patented Adjustable Aluminum Array
<b>Solar Panels</b>	603W
<b>Battery Pack</b>	24V, 90AH Lithium Ion
<b>Charge Controller</b>	MPPT Smart Controller
<b>Lighting Control</b>	Integrated Bluetooth
<b>LED Light</b>	90W LED, 162 lumens per watt
<b>Dimensions (length)</b>	13"
<b>Weight (lbs.)</b>	144



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# LIGHTING MONITORING AND CONTROLS

VALUES  
SMART POWER  
ACCOUNTABILITY CITIES  
**LEADERSHIP**  
CUSTOMER RESILIENCE  
SOLAR PROOFING APPLICATIONS  
COMMITMENT  
PANELS

## LIGHTING MONITORING & CONTROLS

### Standard Wi-Fi Monitoring / Control Option (Included in Retroflex System)

ClearWorld's smart lighting monitoring and control can monitor and control multiple luminaire types. Our primary network control uses 2.4 GHz Wi-Fi networking. You can monitor and control the extensive features of your lighting with built-in Wi-Fi in the pole by going near the pole and pairing it with your smartphone or tablet via the EP-01 app. These lighting controls have been used with different types of luminaries in the past.

ClearWorld's smart lighting controls are fully programmable and are capable of PWM and 0-10V dimming as well as ON/OFF functionality. This is done by connecting to the pole using the EP-01 app. For remote installations - even when there is no internet connection or phone signal nearby - you may be able to monitor and control your lighting by a Wi-Fi connection. The user can then schedule the lights to turn ON/OFF and dim according to their needs and the application. This system works without an Internet connection which is a plus.

ClearWorld's smart lighting monitoring and controls are fully wireless and are based on a 2.4 GHz Wi-Fi networking.

ClearWorld's smart lighting monitoring and control system is a plug and play design and is a set it and forget it solution. The user does not have to worry about changing anything after installation. And it is also easy to use.

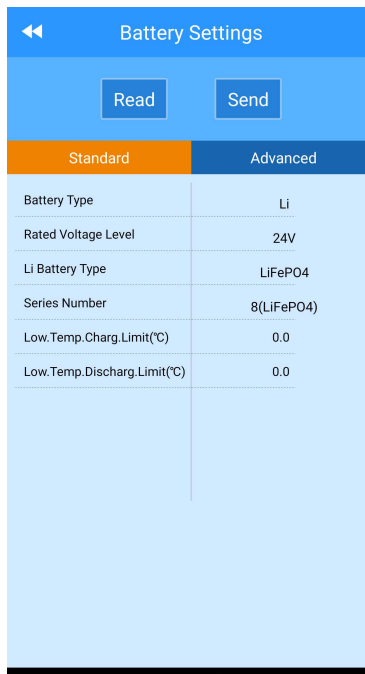
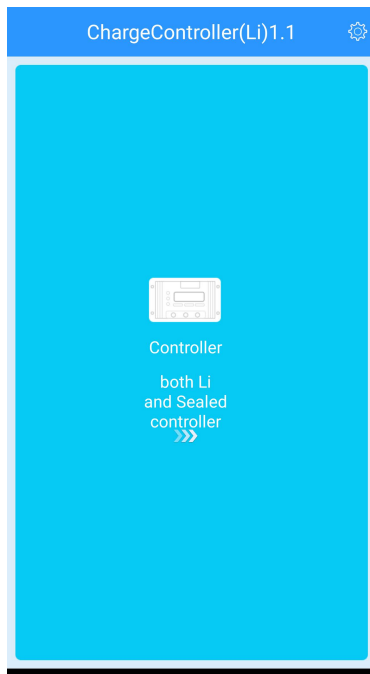
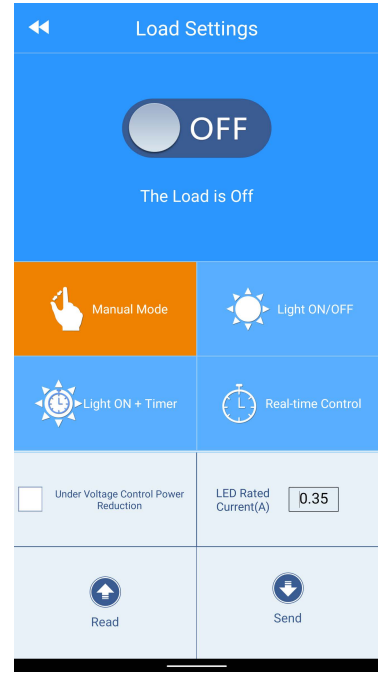
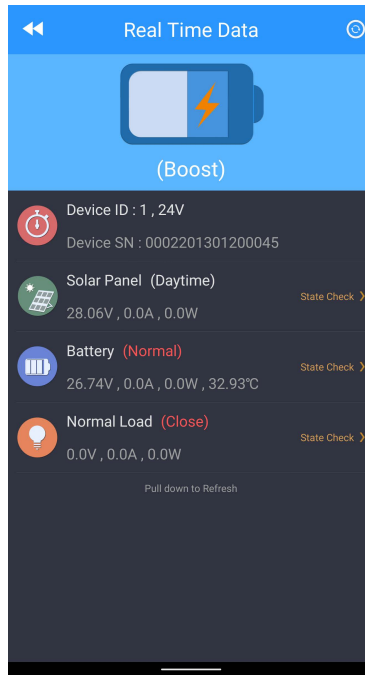
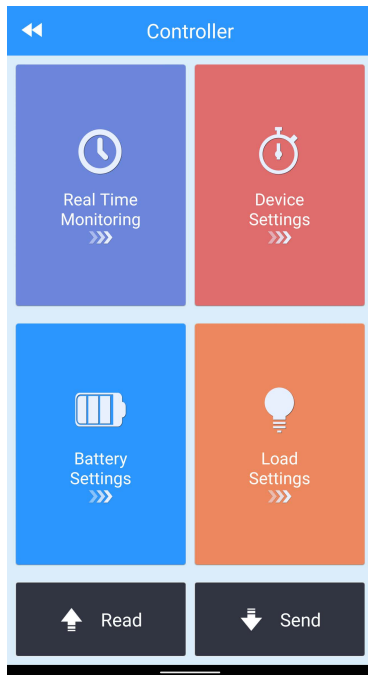
ClearWorld's smart lighting solution has the ability of real time system monitoring. Real time statistics of battery voltage and current, solar panel voltage and current, load voltage and current, power produced by the solar panel as well as power consumed by the load can be displayed in a smartphone or a tablet via the app. The status of each light as well as other information can be viewed in the app.

ClearWorld's smart lighting solution allows the user to monitor system data such as energy production, energy consumption, voltage, current and light status wirelessly. This data can be monitored by the user in real time.



## LIGHTING MONITORING & CONTROLS (CONT.)

Our system runs off solar power completely and is totally off-grid, so there are no power supply requirements.



## **OPTIONAL CLEARWORLD PLATFORM-AS-A-SERVICE**

### **(PaaS) REMOTE MONITORING / CONTROL OPTION (ADDITIONAL)**

ClearWorld's secondary network control uses either Ethernet or Cellular networking. You can remotely monitor and control the extensive features of your lighting via the Internet with your smartphone, tablet, or PC via the ClearWorld PaaS.

The user can remotely monitor and control their lighting from a centralized location from anywhere in the world via the ClearWorld PaaS from their smartphone, tablet, or PC. You will need an Internet connection and a Ethernet or Cellular network to the poles to realize remote monitoring and control of all the poles from anywhere in the world.

**The customer has two options for network connectivity for remote monitoring and control: Ethernet and Cellular.**

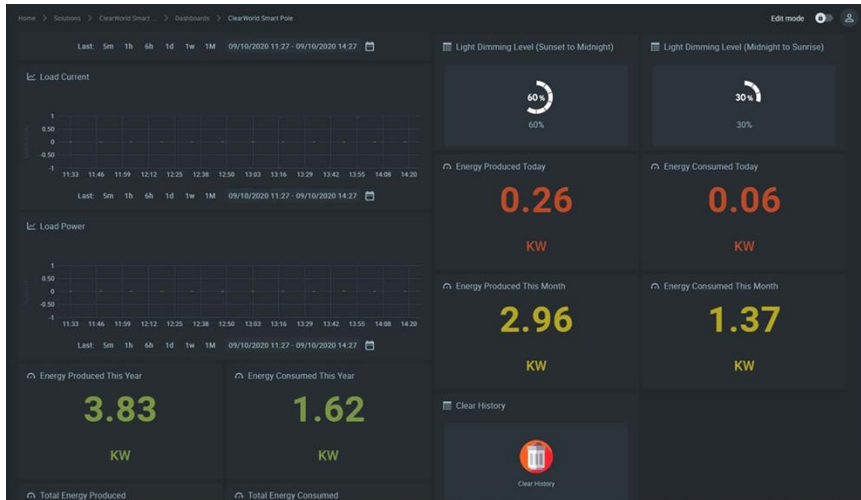
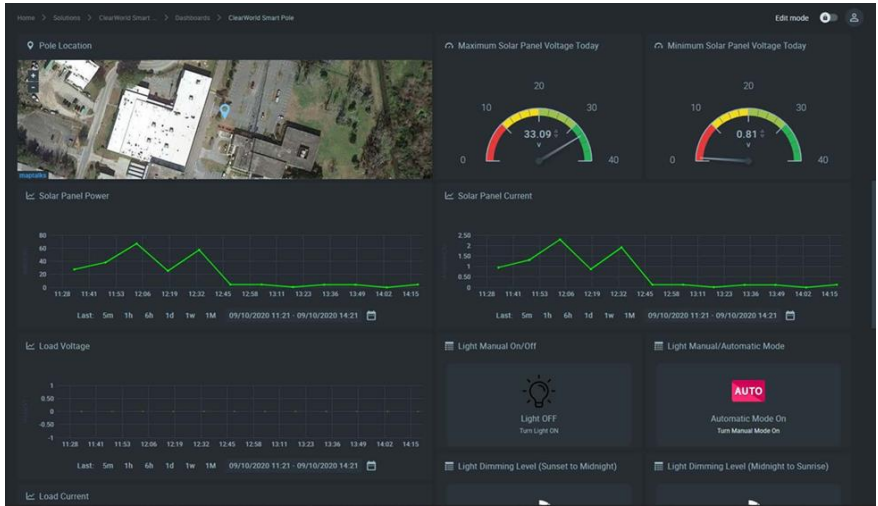
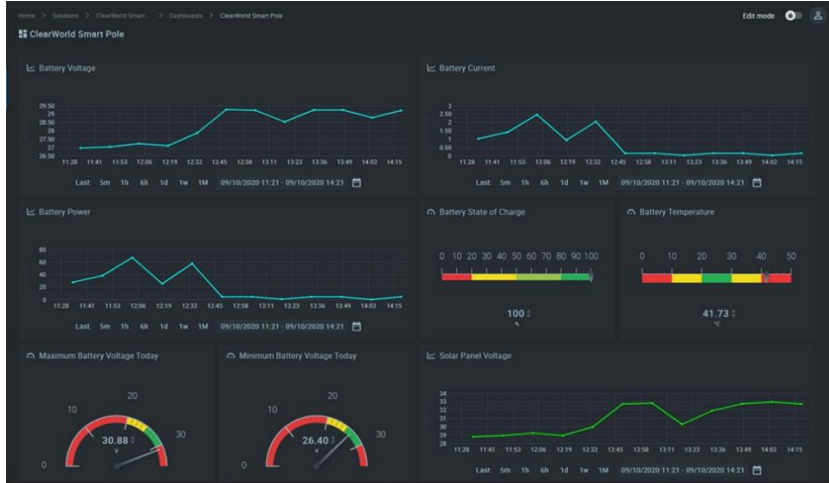
**Ethernet connectivity:** the Ethernet network and the Internet connection must be provided by the customer.

**Cellular connectivity:** the Cellular network is provided by ClearWorld. The Cellular data charges must be paid by the customer.

ClearWorld PaaS remote monitoring and lighting controls has a dashboard to view near real time statistics of battery voltage and current, solar panel voltage and current, load voltage and current, power produced by the solar panel as well as power consumed by the load. The dashboard also allows to view the status of each light as well as other information.

ClearWorld PaaS remote monitoring and lighting controls are fully programmable and are capable of PWM and 0-10V dimming as well as ON/OFF functionality. The user can schedule the lights to turn ON/OFF and dim according to their needs and application remotely from anywhere in the world via the ClearWorld PaaS dashboard.

# CLEARWORLD PAAS DASHBOARD



## **RetroFlex System Warranty Information**

1. Overall full system parts warranty for 10 years.
2. Solar Panels: 25 years.
  - At least 90% output on years 0-10
  - At least 83.5% output on years 10-20 • At least 80%output on years 20-25

All warranted components are repaired or replaced by ClearWorld through its component providers. ClearWorld reserves the right to void the warranty if a warranty claim is a result of third party components, improper installation or extreme operating conditions exceeding the system specifications.

## **Proposal – Additional Details**

### **ClearWorld Manufacturing & Quality Controls**

ClearWorld continues to expand its QC systems to ensure RetroFlex continues to be the most reliable, effective solar LED lighting solution system on the market. RetroFlex is manufactured at our facility in Louisiana and shipped directly to customer locations nationwide. We maintain a spare parts inventory and expert technicians on-hand to remedy any customer issues postinstallation. To date, ClearWorld's installed systems have met or exceeded our base performance measures including total illumination and adverse weather performance.

### **Solar Incentives**

ClearWorld's RetroFlex can qualify for Federal Investment Tax Credits and associated accelerated depreciation for taxable entities. These incentives typically reduce overall system costs by ~50% in the form of tax credit and cash equivalent via depreciation. ClearWorld can provide additional details to the City or its partners upon request. Note: ClearWorld is not offering legal, tax or accounting advice.