



HUBBELL
Outdoor Lighting

CASE STUDY

LARAMIE LED LFS FLOODLIGHTS+SOLAR

LOCATION: Greater Knoxville, TN

COMPANY: Elevation Outdoor Advertising

PRODUCT: Laramie LED floodlight with integrated solar electric power and battery assemblies

Elevation Outdoor Advertising completed a retrofit lighting project utilizing off-grid solar system on two 10' x 36' billboards in Tennessee. They chose the Hubbell Outdoor Lighting Laramie LED LFS floodlight with integrated off-grid solar system to illuminate the billboards.

What prompted the lighting change?

Utilized a 30% Federal tax credit that is available to corporate end users of solar power systems—of which our off-grid solar power lighting systems most definitely apply.

Did this system replace an existing system? If so, what type and how long was the existing system in place?

Yes, previous fluorescent lamp system in place for 6 years. Four(4) solar power 15 Watt Laramie LED flood fixtures were used to replace four(4) solar powered 39 watt CFL flood light fixtures that were sold as part of the original billboard lighting system that Elevation Outdoor purchased and installed 6 years ago.

Why was Solar and LED lighting system specified for this project?

Solar was required because of inability to service with electrical lines; LED because of performance (interesting to note that not only did the four(4) 15 watt Laramie LED fixtures improve lighting performance on 10' x 36' billboard (relative to four(4) pre-existing 39 watt CFL fixtures) but the four(4) 15 Watt Laramie LED fixtures also enhanced the performance and reliability of the solar power system due to the significantly lower overall energy consumption relative to four(4) 39 watt CFL fixtures.



Energy-efficient solid state lighting 15w Laramie LED LFS floodlights.



HLSEPA170 solar electric power assembly features two 85 Watt solar panels.

How does the illumination of the Solar LED system compare to other lighting sources?

The Laramie LED LFS floodlights produce 70-75% illumination compared to conventional lighting. Equally as important the LED floods consume a small fraction of the energy compared to conventional lighting. Metal halide fixtures make off-grid solar power billboard lighting impractical—not only because of the high system cost but also because the solar array needed to power conventional billboard lights are too massive in size to be mounted to a billboard structure. The key takeaway here is the fact high performance, low wattage LED fixtures, like the Laramie LED LFS flood, makes off-grid solar power billboard lighting feasible from both a lighting performance and economic standpoint. Elevation Outdoor Advertising is leading the way!

Did the LED fixtures provide the desired performance?

Yes! (pictures below are worth a 1,000 words)

Would you recommend the Solar lighting systems to other facility owners/managers?

Yes!

THE RESULTS



Each of the featured billboards (10' x 30) utilizes two (2) solar power systems which are mounted to the top of the billboard structures, providing ultra-reliable year round power for four(4) 15 watt Laramie LED floodlights.



Laramie LFS LED Series

MAX CANDLEPOWER: 2,001

WATTS: 15

LUMENS PER WATT (EFFICACY): 72

CRI: 67 **CCT:** 5000K

HLSEPA170 Solar Electric Power Assembly

SYSTEM: HLSEPA features (2) 85 Watt solar panels integrated together, full protective panel pan, and double support power bracket

POWER: 224 Amp hour battery (2) 112 amp hour batteries DC power

CONTROLS: Adaptive Lighting Controller (ALC) is programmed for 8 hours of split night operation – dusk + 6 hours – off – back on 2 hours pre-dawn

Performance



The Hubbell Outdoor Laramie LFS LED 12V DC available in wide, medium or narrow flood lighting applications.

Fixture: Hubbell Outdoor Laramie LFS LED 12V DC

Three beams: NEMA 6x6, 4x4, 1x1

Lumens: 809 Wide, 888 Medium, , 908 Narrow,

IES files: LFS12LD5KW.IES, LFS12LD5KM.IES, LFS12LD5KN.IES

