

CUSTOMER PROFILE Mercedes Benz Plant AL

Estimated Annual Costs Per Light using Public Tariff Rate

Power Costs (SL Tariff Rate)	\$	97.20
Maintenance (Estimate)	\$	85.00
Total Annual Costs	\$	182.20
Total Annual Costs (13 Lights)	\$	2,369

Net Purchase Costs for LED and LED + Solar RetroFlex

	LED Retrofit	LED + Solar RetroFlex (Grid-Tied)	LED + Solar RetroFlex (Off-Grid)
Purchase Price	\$ 525	\$ 2,975	\$ 3,600
# of Units	13	13	13
Total Purchase Price	\$ 6,825	\$ 38,675	\$ 46,800
ITC 48	0%	30%	30%
Cash Savings from ITC	\$ -	\$ 11,603	\$ 14,040
Depreciation NPV as %	0%	22.3%	22.3%
Cash Savings from Depreciation	\$ -	\$ 8,625	\$ 10,436
USDA REAP Cash Grant	25%	25%	25%
Cash Savings from REAP Grant	\$ 1,706	\$ 9,669	\$ 11,700
Total Cash Savings	\$ 1,706	\$ 29,896	\$ 36,176
Net Cost to Customer	\$ 5,119	\$ 8,779	\$ 10,624

Estimated Payback Period (Years)

	LED Retrofit	LED + Solar RetroFlex (Grid-Tied)	LED + Solar RetroFlex (Off-Grid)
Total Annual Costs (13 Lights)	\$ 2,369	\$ 2,369	\$ 2,369
Net Cost to Customer	\$ 5,119	\$ 8,779	\$ 10,624
Payback Period (Years)	2.2	3.7	4.5

Assumptions

Street Light Retail Rate (equivalent, in \$/kWh)	\$	0.06
MACR Tax Rate		30.0%
MACR Int Rate (to determine NPV of MACR cash value)		5.0%

color code

Changes made to V2

color code

Depends on project scope, legal entity, and coordination with AL Director of REAP

Questions submitted by Gerry at Daimler 10/22/2015

1 Can you explain briefly the difference between the grid-tied and off-grid options? For instance why is purchase price different?

The grid tied system that is being proposing is a combination of Solar/LED, We Use the existing electrical lines with an inverter to push power back to your panel box as a (net metered solution)during the day to off-set your operational costs. At nighttime, we would retrofit the existing lights by changing them to an LED supplement which provides additional savings at night time. The Off-Grid system is a system that is not connected to the grid and provides security lighting when the grid goes down. The on-grid system does not provide this benefit.

2 What is ITC 48?

ITC 48 is a broad investment federal tax credit in the U.S. It applies to federal taxes.

ITC 48 includes a section specific to renewable projects (including solar).

An application is filed with the IRS for ITC 48 for the 30% federal tax credit based on the components and value of the system.

Typically, solar projects can include the costs of the array, mounting system and components in the total cost of the system.

For example, a system that costs \$10,000 would submit \$10k as total system cost and take a \$3,000 tax deduction against federal taxes in the tax year.

ITC can be carried forward.

ITC of 30% will expire December 31, 2016.

ITC is viewed as a cash equivalent because it is typically used within the same year as the installation, thereby achieving a positive cash flow effect.

3 How would the USDA grant money applied, is it a rebate or can it be applied to offset the purchase price?

The USDA REAP is a cash grant provided to the owner of the system (Daimler). There is an application process prior to installation that Cleaworld can manage/support.

REAP grant is received following completion of installation and verification of system by USDA state director.

The cash grant would be received directly by Daimler. The cash grant is typically received within 3 months of project completion.

Additional comments by Clearworld 10/23/2015:

A1 ITC and MACR would only apply to solar projects. This version has made the change to the template to reflect no ITC and no MACR for the LED retrofit only.

A2 USDA REAP is available to rural small businesses.

Depending on the project scope, legal entity filing the project and authorization/approval by AL Director, this project may or may not be eligible.

A3 MACR depreciation is part of the ITC benefit for renewable projects. Unlike ITC, it is realized over 5-6 years.

In evaluating payback, CW uses the NPV of MACR 5-year benefit to determine the NPV cash flow benefit to the customer.