Courtyard by Marriott-Lancaster Solar Project Facts

Project   First U.S. Marriott hotel to be fully powered by the sun. (Marriott operates 5,700 U.S. hotels.)

Timeline   Installation: June through August 2018; commissioning: September 2018.

Installation   The solar array is a one-megawatt (AC) rooftop-mounted assembly that will produce approximately 1.2 million kilowatt hours of electricity each year.

Developer   High Hotels Ltd. in conjunction with High Real Estate Group LLC, High Associates Ltd., and High Properties.

Owner   Solar array - High Hotels Ltd.; warehouse - High Properties - 1853 William Penn Way, Lancaster, Pennsylvania.

Customers   High Hotels Ltd. Courtyard-Lancaster, a five-story, 133-room, award-winning hotel located at 1901 Hospitality Drive, Lancaster, Pennsylvania. Annual historical hotel power consumption is 1,177,000 kWh; any additional electricity produced will be sold to the utility, PPL.

Site   Located on the roof of a warehouse at 167 Greenfield Road, Lancaster, Pennsylvania, the 135,200-square-foot project is larger than two football fields. The rooftop location saves more than three acres of open land and has additional aesthetic benefits.

Solar panels   Approximately 2,700 340-watt Hanwha Q CELLS solar modules with an expected service life of 40 years. Panels are 77"x39"x1.5".

Inverters	Manufactured by SMA (OTC: SMTGF), model Sunny Tripower CORE1 50KW 480VAC free-standing PV inverter.
Mounting	Fixed-tilt, roof-mounted aluminum racking from ecolibrium.
Contractor	MVE Group, Inc., Ephrata, Pa.
Jobs created	Approximately 12 construction, electrical, and other jobs will be created at the site.
Financing	High Hotels received a grant of $504,900 from the Commonwealth Financing Authority (CFA) through the Solar Energy Program. Additional project financing was arranged through M&T Bank.
Hotel	Five stories, 133 rooms, constructed in 2004.

EPA CALCULATOR

Equivalency Results How are they calculated?

The sum of the greenhouse gas emissions you entered above is of Carbon Dioxide Equivalent. This is equivalent to:

922 Metric Tons ▾

Greenhouse gas emissions from

197	2,260,012	321	45.9
Passenger vehicles driven for one year	Miles driven by an average passenger vehicle	Tons of waste recycled instead of landfilled	Garbage trucks of waste recycled instead of landfilled

CO$_2$ emissions from

103,757	1,008,846	12.2	99.6
gallons of gasoline consumed	Pounds of coal burned	tanker trucks' worth of gasoline	homes' energy use for one year

0.234	138	5	30,860
Wind turbines running for a year	homes' electricity use for one year	railcars' worth of coal burned	Incandescent lamps switched to LEDs

-or-   -or-   -or-   -or-

2,135	37,695	0.0002
barrels of oil consumed	propane cylinders used for home barbeques	coal-fired power plants in one year

-or-   -or-

2,135	37,695	0.0002
barrels of oil consumed	propane cylinders used for home barbeques	coal-fired power plants in one year

-or-   -or-

Carbon sequestered by

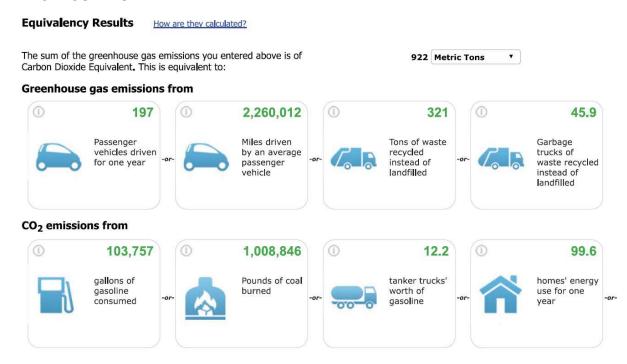| 3,897	1,086	7.5
tree seedlings grown for 10 years	acres of U.S. forests in one year	acres of U.S. forests preserved from conversion to cropland in one year

-or-   -or-

EXHIBIT 1-K   https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator