

**Pre-Site Assessment estimates**  
**Americology Building Solar Electric System Details**  
Time value of money not include in this analysis

**Assumptions and Estimates**

Sizes considered                                           10 kW  
                                                                             15 kW

Panel orientation                    facing due south (180 degrees) sloping 30 degrees from the horizontal  
                                                                             balasted flat roof mounted pans

Production estimate per kW                                           1282 kWh/year           assuming 20% system losses  
 shading and snow cover losses                                                                                            2%  
 System annual output per kW ac                                                                                    1256

System cost                                 \$             8,000 per kW installed  
                                                                             note, larger systems should have a lower installed cost per kW

**Energy Production and Costs**

kW	kWh/year	Installed Cost	Focus on Energy Reward	WE Grant	Final Cost
10	12,564	80,000	\$ 25,127	\$ 27,436	\$ 27,436
13.75	17,275	110,000	\$ 34,550	\$ 37,725	\$ 37,725
<b>15</b>	<b>18,845</b>	<b>120,000</b>	<b>\$ 35,000</b>	<b>\$ 42,500</b>	<b>\$ 42,500</b>

The 13.75 kW system was added because it maximizes the reward Focus level given the cost per kW installed

**First ten years WE Energies Solar Buy-Back Rate Payments**

kW		value of sales to WE	
10	\$ 26,384		0.21
13.75	\$ 36,277		
15	\$ 39,575		

**Net Income from System after Ten Years**

kW	
10	\$ (1,053)
13.75	\$ (1,448)
15	\$ (2,925)

**Income per kWh Generated**

kW	
10	\$ (0.0838) per kWh
13.75	\$ (0.0838) per kWh
15	\$ (0.1552) per kWh

**Rough area needs for balasted rooftop racks**

kW	
10	1700 square feet
13.75	2338 square feet
15	2550 square feet

assuming that twice the panel area is need and panel area needs are 85 square feet per kW of panels