



University of Idaho Solar Site Assessment



Location	Public Prox.		Payback Period		Payback ITC	Aesthetic Impact	Location Access	Service Access	Percent of Load		Site Preparedness		Total Points:
	TIP	Points	Years	Points	Years	Points	Points	Points	% of Load	Points	Roof Age	Points	
Shoup	2304	5	30.8	3	21.6	5	3	3	105.4	5	1984	1	25
Ed Lawn	1929	3	30.8	3	21.6	1	5	3	50.6	5	N/A	3	23
IRIC Roof	6734	5	29.3	5	20.5	5	5	3	42.2	3	2016	5	31
IT Lawn	96	1	28.4	5	19.9	1	5	1	N/A	1	N/A	5	19
Bookstore	2100	5	26.6	5	18.6	5	5	5	152.8	5	2001	5	35
Facil. Lot	238	1	32.0	1	22.4	5	5	3	N/A	1	N/A	1	17
JEB Roof	4044	5	30.4	3	21.3	5	3	3	34.9	3	2012	5	27
Swim Ctr.	2933	5	29.8	5	20.9	5	3	1	86.4	5	2013	5	29
Commons	5486	5	30.3	3	21.2	3	1	3	4.5	1	2000	3	19
SRC Roof	1903	3	30.9	3	21.6	5	3	3	10.3	1	2000	3	21
Kibbie Lot	404	1	40.8	1	28.5	3	5	5	N/A	1	N/A	1	17
GJL Roof	4312	5	30.2	3	21.2	5	5	5	18.1	1	2011	3	27
Kibbie	421	1	33.4	5	23.4	1	1	3	40.2	3	2001	5	19
PEB Roof	1289	3	29.4	5	20.6	3	3	1	33.6	3	2013	5	23
A&A East	821	1	31.2	1	21.9	5	5	1	92.8	5	2000	3	21
Criteria Comments:	<p><i>This metric is the array's public visibility, based on the number of TIP tags within 1/8th of a mile.</i></p> <p>>2000 = 5 <2000 = 3 <1000 = 1</p>		<p><i>This metric represents how quickly a given array will generate its installation cost worth of energy.</i></p> <p>5 = Lowest 3 = Neutral 1 = Highest</p>		<p>Hypothetical metric.</p> <p>Reference for if federal investment tax credit can be applied.</p>	<p><i>This metric takes into consideration how a solar installation will affect the aesthetic of a given location.</i></p> <p>5 = Positive 3 = Neutral 1 = Negative</p>	<p><i>This metric reflects the relative ease of access to the location for installation and maintenance.</i></p> <p>5 = Easy 3 = Neutral 1 = Complicated</p>	<p><i>This metric is the relative ease of access to the location switch gear for interconnection.</i></p> <p>5 = Easy 3 = Neutral 1 = Complicated</p>	<p><i>This metric demonstrates what percent of the buildings consumption the array would cover.</i></p> <p>5 = High 3 = Medium 1 = Low</p>	<p><i>Metric based on the age of the roof and amount of work required to prepare site for installation.</i></p> <p>5 = Lowest 3 = Neutral 1 = Highest</p>	<p>Total Score:</p> <p><i>this reveals the most suitable locations. Higher is better. Greener is better.</i></p>		

ADDITIONAL LOCATIONS: School of Music, Ag. Sci, HR, A&A, Gib Hall, Ed. Roof		Building Energy Consumption Calculations				
		FY16	FY15	FY14	Av/Meter	Total
	Shoup	53012	51171	57327	53836.67	53836.67
	JEB	357180	306655	339553	334462.7	334462.7
	Commons	414312	425355	425702	421789.7	1595794
		737130	425355	425702	529395.7	
		418161	452755	481131	450682.3	
		213617	160409	207753	193926.3	
	Kibbie	62183	61325	70528	64678.67	2471700
		256978	368299	425343	350206.7	
		260720	216906	279705	252443.7	
		1104299	1231400	121064	818921	
		53144	63993	44383	53840	
		301043	292277	258752	284024	
		138102	203017	203720	181613	
		472175	482149	443596	465973.3	
	PEB	460448	464904	390346	438566	438566
	Bookstore	188123	200590	198316	195676.3	195676.3
	SRC	841273	849033	800871	830392.3	927740.3
		96278	97061	98705	97348	

Data for Calculation of Metric									
Area (m)	Consum.	kW DC	\$/W	kWh/yr	Prod. \$	CO2 lbs	Type	Location Comments:	
267	53836.66667	40	2.40	56729	3120.095	73840	Roof	Needs roof repair	
534	224586	80	2.41	113600	6248	147680	Ground		
542	334462	100	2.28	141115	7761.325	183449.5	Roof		
1004	N/A	150	2.22	213443	11739.365	277475.9	Ground	Vehicle access, iconic	
267	195676.3333	200	2.18	298949	16442.195	388633.7	Roof	Easiest roof access	
210	N/A	40	2.40	54665	3006.575	71064.5	Cover	Would need structures	
450	334462.6667	85	2.30	116867	6427.685	151927.1	Roof		
1340	379485	250	2.15	328050	18042.75	426465	Roof		
334	1595794	50	2.37	71195	3915.725	92553.5	Roof	Difficult maintenance	
370	927740.3333	70	2.32	95904	5274.72	124675.2	Roof	Difficult maintenance	
2120	N/A	400	3.09	551857	30352.135	717414.1	Cover	Would need structures	
520	756381.249	100	2.28	136868	7527.74	177928.4	Roof	Cluttered roof	
800	2471700.333	725	2.52	993808	54659.44	1291950.4	Roof	Iconic	
710	438566	105	2.27	147139	8092.645	191280.7	Roof		
500	88284	60	2.35	81964	4508.02	106553.2	Ground	Upcoming construction	
<i>Area of the array in meters.</i>	<i>Location energy consumption. (If applicable)</i>	<i>Nameplate capacity of the solar array. Conservative estimates used.</i>	<i>Cost per installed watt of solar modules. Rating of scale and efficiency.</i>	<i>This is the annual energy production of the solar array.</i>	<i>Value of annually produced energy.</i>	<i>Annual equivalent CO2 offsets of array.</i>	<i>Location or type of installation</i>	Assessment developed by Kennedy Caisley, Kristyn Hardy, and Jeannie Mathieson	

Power function for Cost per Watt estimation

Given Values	
Size	\$/Watt
5.6	2.93
200	2.13
1000000	1.42

<http://www.nrel.gov/docs/fy16osti/66532.pdf>

