STUDENT SUSTAINABILITY COMMITTEE

Semesterly Report

Thank you for your commitment to green initiatives at the University of Illinois. One of the ongoing requirements listed in the terms of the funding agreement for your project is the submission of semesterly reports with key information about your project. In addition to this form, please provide additional financial documentation and/or progress photos if available.

Please be as accurate as possible in describing the project (including possible setbacks or challenges in meeting the initial goals of the project). Not fully meeting your project's goals will not disqualify you from making future funding requests as long as your reports are as complete and accurate as possible. If you have any questions, please contact the Student Sustainability Committee, at sustainability-committee@illinois.edu.

Project Name: InSPIRE Solar Powered Outdoors Table (SPOT) Project

Date of Report Submission: 12/28/18

Project Purpose:

To create a Solar Powered Outdoors table for public use in which students can sit on and charge their devices. The table will feature two poles and on top of each pole will be a solar panel and these panels will charge a battery located in a weatherproof electrical enclosure. Thick wires will extend from the enclosure to outlets from where people may charge their devices.

It is meant, in part, to offset carbon emissions by a small amount. However its primary purpose is to promote solar energy and educate people - particularly students - on solar energy & solar energy systems. Educational materials and links to our design drafts will be on the table itself. These design drafts will allow other RSOs to recreate our solar energy system in their own endeavors.

Detailed Accounting of Expenditures to Date:

All Expenses pertain to the solar energy system. All details are included in appendix 1. Only items in that list have been bought by funds from the SSC.

Project Progress to Date:

Please note that since funding was acquired much later than expected, the original dates in the application are no longer pertinent.

As for milestones, we have finished our final solar energy system design and have gained approval from an ECE professor (Philip Krein) as well as an electrical engineer in F&S (Joseph Y. Youakim). We are waiting on the parts for the final solar energy system to be purchased by our faculty sponsor. Our structural design nearly has approval from F&S and we

are compiling a list of items to purchase. We have completed a 3D model of what we expect our project to look, this model is on appendix 2.

Student Involvement and Outreach to Date:

Students are involved with assisting on the design process (providing feedback and suggestions). Student members also help contact relevant people in campus for tasks such as searching for a permanent location for the project, people to help review designs etc.

Students also help with general research of products to purchase and research on any other technical & non-technical matters related to the project.

Marketing and Promotion Efforts to Date:

No marketing or promotional efforts yet

Additional Comments:

The name of the project may differ from the original name given in our application.

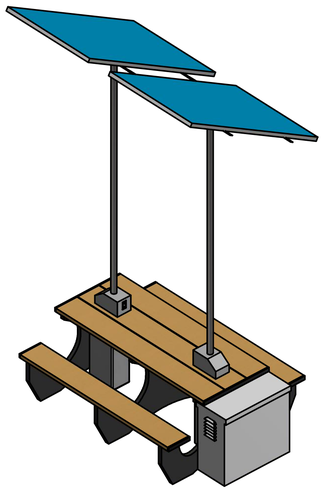
Also, we are considering an added feature to the system. The electrical enclosure containing the final solar energy system can now be disconnected from the table temporarily. This mobile enclosure can now be taken anywhere and can be used to power anything within it specifications. InSPIRE is planning on connecting our 100watt solar panel and an electric grill on to the enclosure in order to sell burgers and hotdogs as part of our fundraising endeavors. This allows us to promote solar energy in another way. The price of the system will not increase from prior estimates but the amount we have from SSC should still be sufficient to cover all current costs.

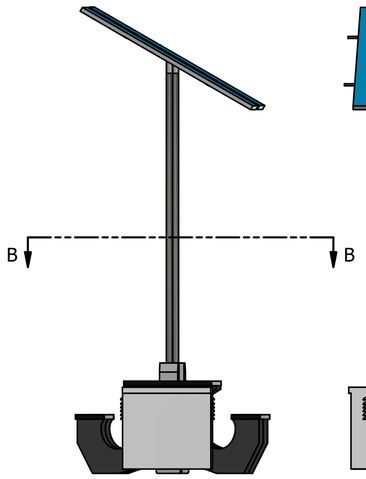
Appendix 1

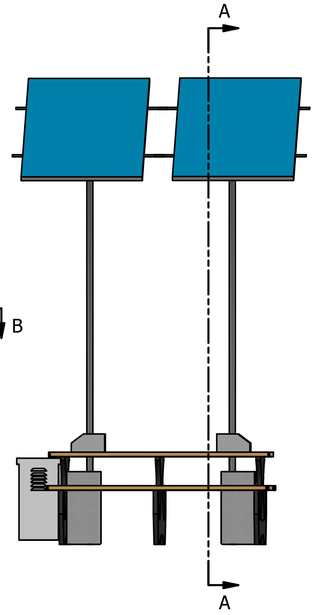
Electrical System Purchase List (last modified: 11/3/18)		
(#) Part	**Quantity**	**Price**
(2) DC Circuit Breaker #1	**2**	$29.10
(3) Ground Faults Protection Device	**1**	$51.23
(4) MPPT Charge Controllers	**1**	$399
(5) DC Circuit Breaker #2	**1**	$28
(6) Battery Bank	**2**	$99.99
(6) Battery Bank **(allternative if sold out on Amazon)**	**2**	$128.74
(7) Inverter	**1**	$642.08
(7) Inverter **(alternative store if other is sold out)**	**1**	$652.19
(8) AC Circuit Breaker	**1**	$8.94
(9) Outlets	**2**	$20.99
(10) Low Voltage Disconnect	**1**	$55.50
Total (without alternatives)	**15**	**$1,484.70**
Total (If both alternatives are used instead)		$1,552.31

** no alternatives where bought

Appendix 2







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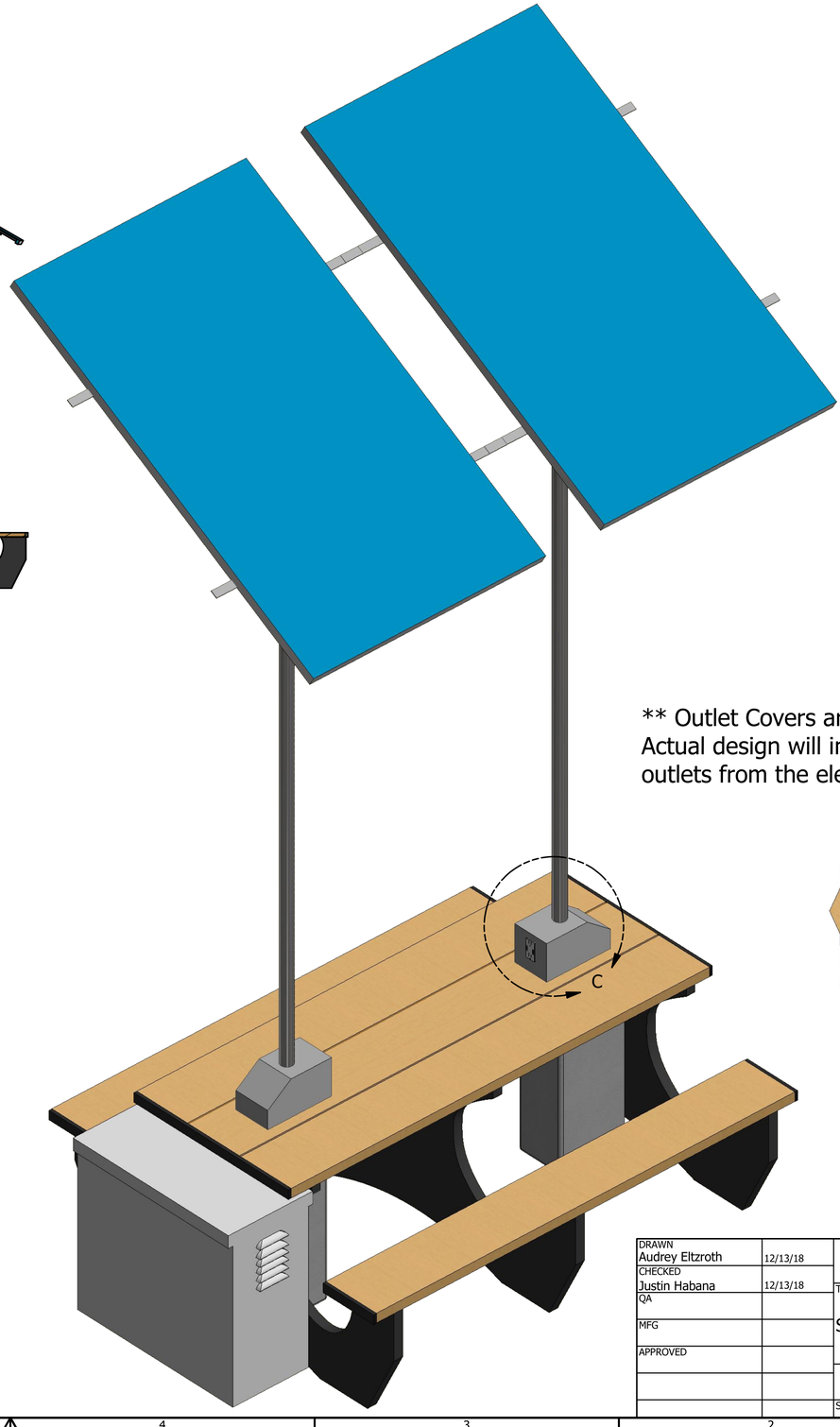
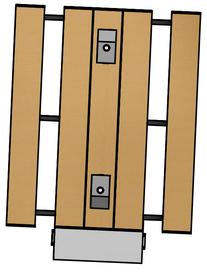


** Outlet Covers are not displayed on this model. Actual design will include outlet covers to protect outlets from the elements.



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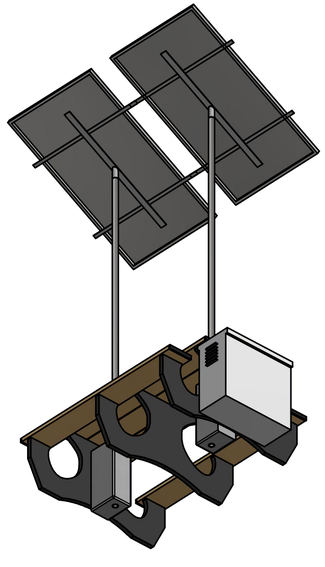

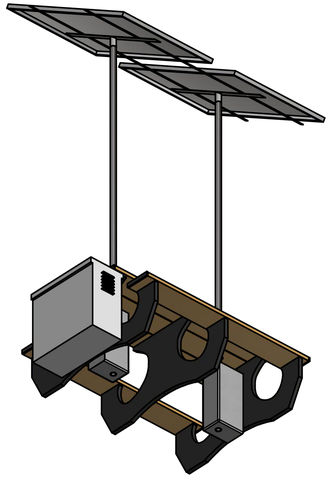

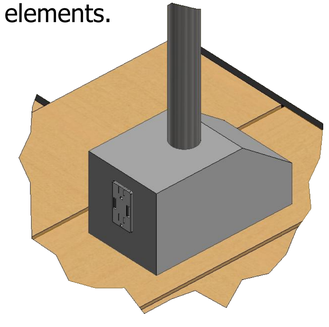

DETAIL C: Outlets
SCALE 0.22 : 1

DRAWN Audrey Eltzroth	12/13/18	InSPIRE Project Design Team
CHECKED Justin Habana	12/13/18	TITLE: Solar Powered Outdoors Table (SPOT)
QA		
MFG		
APPROVED		
		SIZE D · DWG NO solar table assembly · REV
		SCALE 0.04 : 1 · SHEET 1 OF 1