

Appendix G. Solar Cell Report

Your report will be based on the type of solar collector you intend to use in the FSGP 2019 event based on Reg. 8.1. The following are instructions on preparing your team's report. Prepare your report using the instruction set that matches your solar car entry's style of array.

Your report should contain the following:

- (1) Team Name
- (2) Team Number
- (3) Array type (Silicon only, Ga/As only, or mixture) based on Reg. 8.1.F
- (4) Complete list of cells used on your solar collector. List should indicate (Reg. 5.1.F) for each unique type of cell used:
 - a. Cell manufacturer's name and contact info
 - b. Stock number, type, or description
 - c. Manufacturer's quote for cell area (square centimeters)
 - d. Manufacturer's quote for performance
 - e. Cell area (square centimeters)
 - f. Include a copy of the manufacturer's data sheets in the appendix of your report for each type of cell. *NOTE: you are only allowed a maximum of 6 types of cells. Any change in any of the cell characteristics would dictate a new cell type being used.*
- (5) A detailed breakdown of the size and dimensions of each type of cell listed in #4 after trimming or cutting as placed on the solar car. Show your calculations on how you determined cell area. Cell area should be in square centimeters (Reg. 5.1.F.6).
- (6) A detailed drawing showing the specific layout of your solar collector including how the array is broken into sub arrays and the layout for each solar cell indicating which type of cell is used where on the array (Reg. 5.1.F.7).
- (7) Calculations determining the total cell area for your whole solar collector. Show your calculations and use square centimeters (Reg. 5.1.F.7).
- (8) Indicate all other non-photovoltaic/ photovoltaic technology used as defined in Reg. 8 Report how these technologies will be used during driving and charging times. Indicate how these technologies will fit into the car volume allowed per Reg 9.1.

All calculations should be reproducible by inspectors.

The purpose of these reports is to pre-scrutineer your car's solar collector. Inspectors will compare your report to your car at Scrutineering. Be sure to remember to bring a sample raw solar cell (Reg. 8.1.H) of each type used to Scrutineering for validation purposes.

Appendix H. Solar Cell Approval Form



FSGP 2019 Solar Cell Approval Form

Email completed form to ascteams@americansolarchallenge.org. The manufacturer's specification sheet also needs to be submitted.

Team Information	Date Submitted	
	Team Number	
	Organization/School	
Team Array Contact	Name	
	Phone	
	Email	
Manufacturer's Specifications	Manufacturer	
	Manufacturer Contact POC, Phone, & Email	
	Type	
	Cell Name	
	Cell Model Number	
	Area of Single Cell (cm ²)	
Complete at Least Three of the Following Spaces Based on Manufacturer's Specifications	Vmp (Volts)	
	Imp (Amperes)	
	Pmp (Watt)	
	Efficiency (Percent)	
Vehicle Array Specifications	Cell Area After Trimming for Placement on Car (cm ²)	
	Number of Cells in Array	
	Total Array Photovoltaic Area (m ²)	
	Additional Comments	
Supplier Information	Supplier	
	Contact Person	
	Phone	
	Email	
	Supplier Cell Name	
	Supplier Cell Model Number	