

McMaster Solar Car Budget Questions

1. Please elaborate on the insurance that your organization will be purchasing for the Solar Car; this was an item highlighted in red within the budget.

We have been told that MES provides insurance as well as MSU. We have been looking into this since September. At this point in time no insurance has been recorded other than a travel insurance expense from the Solar Car Summary sheet of \$234 (refer to attached excel statement)

Additionally, as manufacturing timelines become clearer after ordering parts, including delays in foam shipment. We decided to not proceed with any insurance-related purchases this year.

2. We noticed that your organization will be running at a deficit this year. Where will the additional funds be coming from should you run into that issue?

Currently, as started by Diana Maltese in reference to McMaster Solar Car we have seen balance sheets which outline a total excess (opening balance) of \$85155 seen on the 2021 expense statement. On which statement is a deficit recorded and from what year? Please refer to the attached excel sheet for more information to see the number which we have been referencing.

	Resources	\$ ¹	\$ ²	\$ ³	\$ ⁴	\$ ⁵	\$ ⁶	\$ ⁷	\$ ⁸	\$ ⁹	\$ ¹⁰	\$ ¹¹	\$ ¹²	\$ ¹³	\$ ¹⁴	\$ ¹⁵	\$ ¹⁶	\$ ¹⁷	\$ ¹⁸
NON-SALARIAL EXPENSES																			
229		\$ 0	\$ 977	\$ 44	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,201	\$ 0	\$ 0	\$ 0	\$ 1,201	\$ 937	\$ 341	\$ 0	\$ 1,201	\$ 603	\$ 0
TOTAL EXPENSES																			
229		\$ 0	\$ 977	\$ 44	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,201	\$ 0	\$ 0	\$ 0	\$ 1,201	\$ 937	\$ 341	\$ 0	\$ 1,201	\$ 603	\$ 0
PERIODIC SURPLUS (DEFICIT)																			
-231		\$ 0	\$ 2,341	\$ 1,664	\$ 680	\$ 0	\$ 0	\$ 0	\$ 27,450	\$ 0	\$ 0	\$ 0	\$ 27,450	\$ 422	\$ 26,967	\$ 0	\$ 27,450	\$ 422	\$ 0
NON-FINANCIAL																			
MAY 1ST OPENING BALANCE																			
\$7,494		\$7,494	\$7,494	\$2,851	\$4,274	\$0,115	\$0,115	\$0,115	\$7,496	\$0,115	\$0,115	\$0,115	\$7,496	\$0,115	\$0,115	\$0,115	\$7,496	\$0,115	\$0,115
ENERGY SURPLUS (DEFICIT)																			
\$7,495		\$7,495	\$0,850	\$8,474	\$0,115	\$0,115	\$0,115	\$0,115	\$7,495	\$0,115	\$0,115	\$0,115	\$7,495	\$0,115	\$0,115	\$0,115	\$7,495	\$0,115	\$0,115
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Based on the case where we currently have the funds which we possess, we will not be running into a planned deficit this year. However, we do plan on spending most of our funds on components for the development of our car.

3. Please confirm if your organization is required to build a new car each year. If so, please provide more details into the tools that can be carried over into future years, if any.

No, we are not required to build a new car each year. Since our club essentially started from scratch, our process for creating the car took much longer as we had little to no resources from previous generations to use. Along with this being a completely different class of car than previous years, it will take much longer. However, even after using our knowledge from this cruiser build, building a car every year is still unreasonable.

4. In previous years, projects completed by your organization required around \$50,000. However, this year, the project is budgeted to cost \$78,000. Is there a reason for this increase?

- Our previous generations of cars were **challenger** class cars. This type of class means the vehicle only fits one occupant. Figure 1 has an example of this class of car. Our current class of car is **cruiser (multi occupant)**. Here are our major costs:
 - i. **Weight increases substantially** requiring extra power to drive the car.
The biggest hit to our budget comes from the **motors**, and since we need extra power, that means we need a dual motor system which is more costly.
 - ii. **Chassis increases substantially** we have recently acquired a quote from our manufacturer regarding the cost for the chassis, it is quoted to cost \$12,270. This is much higher than our budgeted 1,500k for the chassis. So, our budgeted cost should be around \$89,000. Larger chassis, more costly. The same reasoning goes with the shell of the car.

Overall, the car being larger (figure 2) means it's costlier than versions in the past.



Challenger Class, Figure 1



Cruiser Class, Figure 2 (current 2021-2022 model)

5. How many races/events is the Solar Car expected to participate in this entire schoolyear? If 0, what is the plan with the completed car at the end of the year?

The car will not be completed at the end of the year however we will be working on its completion. Therefore, we cannot participate in a race in 2021.