

The year 2018 has been an exciting year for Eclipse. The production of our newest prototype, Eclipse X, along with our podium finish at the 2018 *American Solar Challenge* (ASC) are just some of the highlights of the year. The good news is that 2019 promises to be just as exciting! We are starting the production of Eclipse 10.1 in preparation for the prestigious *Bridgestone World Solar Challenge* (BWSC), which takes place in Australia next fall.

Naturally, we'd like to share our enthusiasm. Hence, what follows is an overview of what we've been doing since our last competition during the summer and what's in store at the Eclipse Headquarters this year:

Fall 2018 summary

1. Looking back on ASC 2018

In early August, the team returned from their journey across the continental US just in time for members to finish their semester. With the knowledge gained from our experience at the ASC, we have taken notes of our successes and failures to better prepare ourselves for the BWSC 2019.

2. Recruitment

In order to ensure the sustainability of our club, we took advantage of the start of the school year to launch a recruitment campaign for new students attending the École de Technologies Supérieures (ÉTS). Through this initiative, some promising new members have been integrated into our mechanical and electrical teams. It is with this same goal that Eclipse will participate in the Open House on January 27 in the Great Hall of ÉTS.

3. Logistics preparation for Australia

The WSC 2019 will be a new experience for all members of the team and we are very excited to face the best universities in the world. From the beginning of the fall semester, we started to organize travel plans, accommodations, breakpoints, competition schedules and several other logistical needs that will allow us to arrive well prepared in Australia.

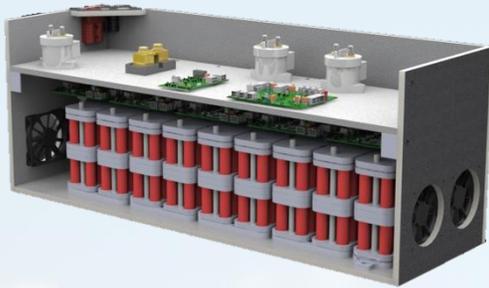
4. Project Design ELE / MEC

To be compliant with the rules of the BWSC, as well as improve the performance of our prototype, the mechanical and electrical department have returned to the drawing boards to revisit several of the car's subsystems. The fall semester was devoted to the conception and design of these new systems so that their integration into the car could begin in January 2019.

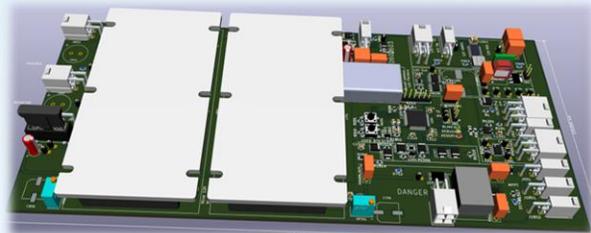
Winter 2019 objectives

Winter 2019 will be a busy time for our team members. It's time for all of our departments to finalize and install their new designs in the car. Here is an overview of the work that will be done:

1. New battery



2. New power supply



With:

- A new mechanical design
- Better airflow to maximize heat dissipation
- Upgrades to the battery management system

3. New break system



4. Other projects

- Enhanced telemetry and race strategy
- New steering wheel and dashboard
- New road cage
- New headlights
- Brand new paint job on the car