**Solar Car Challenge**

**Components & Sources - 2021**

***Sources graciously provided by solar car teams of the Solar Car Challenge***

General Guideline

*“One piece of advice that I would give any team new or existing is to find a business owner in their community that is an approved vendor for their school. All public schools have to use an approved vendor system in order to purchase items. Not all businesses want to become vendors and the process to add a vendor can be difficult. We built a relationship with our locally owned automotive supplier, that is an approved vendor, and he adds whatever we need to his inventory. This gives us access to anything on the Internet whether it is new or used. This can help to stretch a solar car team’s budget.*

*Joel Pitts, Team Advisor*

*Greenville High School “Iron Lions” Solar Car Team*

**SOLAR PANELS**

 Wholesale Solar - [www.wholesalesolar.com](http://www.wholesalesolar.com)

SBM Solar - [www.sbmsolar.com](http://www.sbmsolar.com)

CED Green Tech- <https://www.cedgreentech.com/>

Maxeon (Sunpower) – Gen II (22.5% efficient), or Gen III (23.9% efficient) cells

<https://maxeon.com/us/solar-panel-products/maxeon-solar-cell-technology>

Sun Cat Solar – <https://www.facebook.com/SunCatSolar>

SolarBiz - <https://www.thesolarbiz.com/>

**POWER TRACKERS**

 Wholesale Solar - [www.wholesalesolar.com](http://www.wholesalesolar.com/)

 MidNite Solar - [www.midnitesolar.com](http://www.midnitesolar.com/)

 AERL - <https://www.aerl.com.au/>

 Genasun – [https://genasun.com](https://genasun.com/)

 Outback Power - [http://www.outbackpower.com](http://www.outbackpower.com/)

 Nomura Co - <https://www.facebook.com/NomuraCo>

 Elmar - <https://www.prohelion.com/shop/mppt/elmar-solar-race-mppt/>

 SolarBiz - <https://www.thesolarbiz.com/>

**BATTERIES**

 Wholesale Solar - [www.wholesalesolar.com](http://www.wholesalesolar.com)

 Sun Xtender - [www.sunxtender.com](http://www.sunxtender.com)

 PowerSonic – [www.powersonic.com](http://www.powersonic.com)

 SolarBiz - <https://www.thesolarbiz.com/>

 **Lithium Batteries**

 IMR Batteries - <https://www.imrbatteries.com/>

 Battery bro - <https://batterybro.com/>

 Liion Wholesale - <https://liionwholesale.com/>

AA Portable Battery Corp - [www.batteryspace.com](http://www.batteryspace.com) [turn-key lithium battery systems]

 **Battery Management Systems**

 Thunder Struck Motors - <https://www.thunderstruck-ev.com/bms/>

 Nuvation Energy - <http://www.nuvationenergy.com/>

 Orion BMS - <https://www.orionbms.com/>

**MOTORS**

 Cloud Electric – <http://www.cloudelectric.com>

 Electric Motorsport - <http://www.electricmotorsport.com/>

 Thunderstruck Motors - <http://www.thunderstruck-ev.com/>

 Mitsuba Motors - <https://www.mitsuba.co.jp/scr/products>

 Nomura Co special part supplier – [www.facebook.com/NomuraCo](http://www.facebook.com/NomuraCo)

**MOTOR CONTROLLER**

 Cloud Electric – [www.cloudelectric.com](http://www.cloudelectric.com)

 Electric Motor Sport – [www.electricmotorsport.com/](http://www.electricmotorsport.com/)

 Thunder Struck – [www.thunderstruck-ev.com/](http://www.thunderstruck-ev.com/)

Nomura Co special part supplier – [www.facebook.com/NomuraCo](http://www.facebook.com/NomuraCo)

**CUSTOM SPROCKETS**

 Supersprox - [www.supersproxusa.com/special-sprockets/](http://www.supersproxusa.com/special-sprockets/)

 Rocket Sprockets - [www.rocketsprocket.net](http://www.rocketsprocket.net)

 PBI Sprockets - <https://shop.pbisprockets.com/product.sc?productId=551>

**SWITCHES**

 Tecknowledgey - [www.tecknowledgey.com](http://www.tecknowledgey.com)

 Electric Motorsport – [www.electricmotorsport.com](http://www.electricmotorsport.com)

 Mouser Electronics – [www.mouser.com](http://www.mouser.com)

 DigiKey – [www.digikey.com](http://www.digikey.com)

**LOW VOLTAGE PUSH-BUTTON SWITCHES**

 LittelFuse –

[https://www.littelfuse.com/products/switches/manual-battery-disconnect-](https://www.littelfuse.com/products/switches/manual-battery-disconnect-switches/08080100.aspx)

[switches/08080100.aspx](https://www.littelfuse.com/products/switches/manual-battery-disconnect-switches/08080100.aspx)

Longacre Racing - <http://www.longacreracing.com/products.aspx?itemid=1643&prodid=7594&pagetitle=Push-Pull-Battery-Disconnect-Switch---2-Terminal>

**RELAYS**

 Evolve Electronics – GV200: <https://evolveelectrics.com/products/gigavac-gv200>

 GX11: <https://evolveelectrics.com/collections/contactors/products/gigavac-gx11>

 EV Drives - <https://www.evdrives.com/product_p/sol-lev200-12v.htm>

 Nuvation Energy - <http://www.nuvationenergy.com/>

**FUSES**

 Electric Motorsport – [www.electricmotorsport.com](http://www.electricmotorsport.com)

 Mouser Electronics – [www.mouser.com](http://www.mouser.com)

 DigiKey – [www.digikey.com](http://www.digikey.com)

 Grainger – [www.grainer.com](http://www.grainer.com)

 Waytek - [www.waytekwire.com](http://www.waytekwire.com)

 McMaster-Carr - [www.mcmaster.com](http://www.mcmaster.com)

**BRAKES**

 BMI Karts – [www.bmikarts.com](http://www.bmikarts.com)

 Motivational Tubing - [www.motivationaltubing.com](http://www.motivationaltubing.com)

 Chassis Shop - [www.chassisshop.com/](http://www.chassisshop.com/)

 Fastech Racing - <https://www.fastech-racing.com/mcp-brakes/>

**STEERING**

 Motivational Tubing - [www.motivationaltubing.com](http://www.motivationaltubing.com)

 Chassis Shop – [www.chassisshop.com](http://www.chassisshop.com)

**SUSPENSION**

 ATV A-arm suspension – [www.ebay.com](http://www.ebay.com)

 Chassis Shop – [www.chassisshop.com](http://www.chassisshop.com)

 FOX – [www.ridefox.com](http://www.ridefox.com)

**WHEELS**

 [www.summitracing.com](http://www.summitracing.com)

 <https://www.treatland.tv/new-puch-peugeot-motobecane-vespa-moped-parts-s/88.htm>

<http://shop.adapterkings.com> – they make adapter to go from ATV to car

 Nomura Co special part supplier – [www.facebook.com/NomuraCo](http://www.facebook.com/NomuraCo)

**METAL for CONSTRUCTION** – [go local if possible]

 Online Metals - [www.onlinemetals.com](http://www.onlinemetals.com)

 QMF Steel - [www.qmfsteel.com](http://www.qmfsteel.com)

 Garland Steel – [www.garlandsteel.com](http://www.garlandsteel.com)

 Wicks Aircraft – [www.wicksaircraft.com](http://www.wicksaircraft.com)

**BRAKE LIGHTS & TURN SIGNALS**

 O’Reilly Auto Parts - [www.oreilyautoparts.com](http://www.oreilyautoparts.com)

 Grainger - [www.grainger.com](http://www.grainger.com) [for ECCO lights]

 Earl Owen - <https://earlowen.com/> [for ECCO lights]

 Etrailer - [www.etrailer.com](http://www.etrailer.com)

 J&P Cycles - [www.jpcycles.com](http://www.jpcycles.com)

 Chrome Glow - <https://chromeglow.com/> (Super Bright!)

**NUTS/BOLTS/SMALL PARTS**

 McMaster-Carr - [www.mcmaster.com](http://www.mcmaster.com)

Bolt Depot – [www.boltdepot.com](http://www.boltdepot.com)

**LOW VOLTAGE ALARM [12v]**

 QKits Electronics - <http://store.qkits.com/low-battery-alarm-kit-for-12v.html>

 Bonanza – [www.bonanza.com](http://www.bonanza.com)

 Battery Stuff – [www.batterystuff.com](http://www.batterystuff.com)

**COMPOSITE MATERIALS**

Express Composites - [www.expresscomposites.com](http://www.expresscomposites.com/)

 Rock West Composites – [www.rockwestcomposites.com](http://www.rockwestcomposites.com/)

 Fibre Glast – [www.fibreglast.com](http://www.fibreglast.com/)

 Composite Envisions – [www.compositeenvisions.com](http://www.compositeenvisions.com/)

 Dragon Plate – [www.dragonplate.com](http://www.dragonplate.com/)

**SHRINK WRAP**

 Big Shrink - <http://www.bigshrink.com>

Mr. Shrink Wrap - <https://mrshrinkwrap.com/>

Pro-Tect plastics & Supply - <https://shrinkwrapcontainments.com>

**Plastic Sheeting**

Eplastics – [www.eplastics.com](http://www.eplastics.com)

 Unites States Plastic Corp – [www.usplastics.com](http://www.usplastics.com)

 Professional Plastics – [www.professionalplastics.com](http://www.professionalplastics.com)

**POLYISOCYANURATE FOAM**

 Elliott Company - [www.eliottfoam.com](http://www.eliottfoam.com)

 Foam Mart- [www.foammart.com](http://www.foammart.com/)

**Custom Fabrication**

 Xometry – [www.xometry.com](http://www.xometry.com/)

**CAD Programs**

Solid Edge – <https://www.solarcarchallenge.org/challenge/resource.shtml>

(Free for Solar Car Teams)

Solid Works – <https://www.solidworks.com/media/student-sponsorship-program>

(Free with team Sponsorship)

onshape – <https://www.onshape.com/en/education/>

(Free Student & Educatoraccounts – 100% online no download require)