

# TRU SOLAR TABLE DESIGN COMPETITION

## Competition Guidelines (2022-2023)

### Background

This is the second year of the TRU SOLAR TABLE DESIGN COMPETITION. TRU wants solar tables around the campus for the following reasons: to promote renewable energy use; encourage student participation and learning; and have more outdoor places to study and socialize (which are mostly protected from the snow, rain and direct sun).

### General Information

This competition is open to all students from Thompson Rivers University. Only TRU students can enter the competition and they can do so individually or as part of a student-only team. There will be one (1) winning submission picked from all submitted designs. Only one table will be chosen as the winning submission in 2023.

### The Prizes

The winning submission will see their design adapted to at least (1) one solar table to be constructed on the TRU Kamloops campus outside the front doors of the North Tower residence in the small grass lawn to the left of the tower entrance (if you're leaving the building), as seen in Figures 1 and 2 below (various angles of the lawn are provided in the images but it is recommended that designers visit the location in person since there is a slight angle to the site). In addition, the winning designer(s) will receive \$600 (all official TRU fees must first be paid before any money is awarded (for instance any overdue fees)).

### Design Guidelines

Designs should be submitted online as portable document format (PDF) documents. Either hand drawn documents or computer-generated design software documents will be accepted.

The budget for this project is a maximum of \$10,000, which includes labor, materials, and other miscellaneous fees. *Construction and installation will be performed by faculty and students from the TRU School of Trades and Technology.*

The dimensions of the design could either be in metric or imperial measurements and need to fit in the location seen in the images in Figure 2

Do not overthink! Schematic and wiring diagrams are not needed, but the design should incorporate a secured enclosure for the electrical equipment (in either the small or large option as seen in Table 1) so that batteries are easily removable if needed. Also, each design needs to include a maximum of two solar panels (*size of each panel is 2.08m x 1.03m*).

**Table 1. Specifications of the Enclosure with the Electrical Equipment**

Enclosure Sizes Options	Description	Minimum Dimension of the Secure Enclosure	Price of Secured Enclosure and Electrical Equipment
Small Option	USB Charging Only	300mm x 300mm x 300mm	\$1,500
Large Option	USB and AC Device (laptop or e-bike) Charging	600mm x 600mm x 600mm	\$2,500

### Design Content

Be creative! The minimum purposes of the solar table are as follows:

- Be able to charge devices that plug into an outlet (*e.g. phones, laptops, electric bike, motion sensing internal or external lights, etc.*). The electrical system will be attached to batteries and not tied into the grid.
- Be able to accommodate seating of at least six (6) people for studying or hanging out. Solar panels attached to a roof structure to cover the table and seating is desirable (to provide shelter from snow, rain and sun).
- Be able to show awareness of TRU's advocacy for sustainability
- Be practical enough to be constructed (*use of sustainable, reclaimed, recycled, and readily available materials is highly encouraged*)

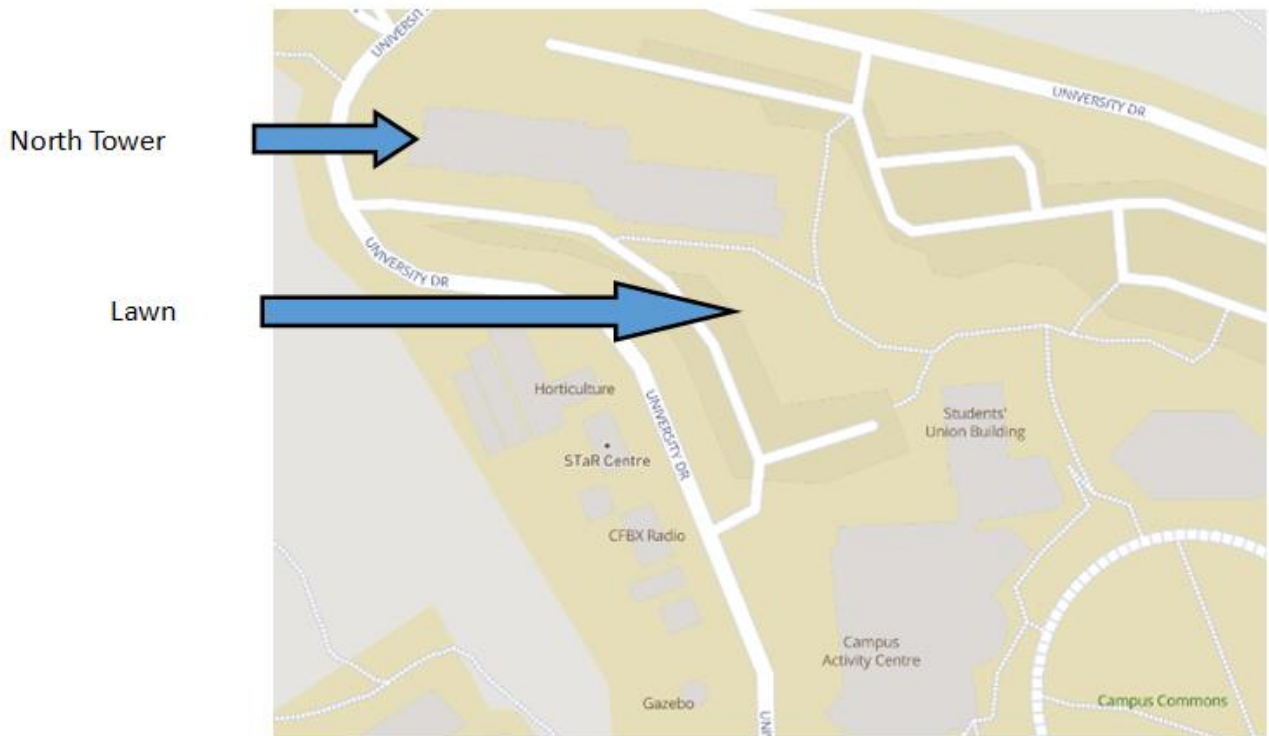
## Submission Details and Dates

All submissions should be sent through email to the TRU Sustainability Office ([sustain@tru.ca](mailto:sustain@tru.ca)) with your complete name/s, phone number/s, email/s, and student number/s **ON OR BEFORE February 28, 2023**. Each submission will be assigned an alias in order to be anonymous to the judges; for this reason, do not put your name(s) anywhere in the drawings. Email entries should have a subject of **'SOLAR TABLE ENTRY 2023'** with a maximum of a 500 word description.

## Judging

The designs will be judged throughout March 2023 by a panel of TRU faculty, staff, and students according to the most practical, economic, and creative design choices. The winner will be announced by March 31, 2023 and will be notified via email and/or phone call.

**Figure 1. Vicinity Map**



**Figure 2. Site Images – Location of the solar table will be approximately the location of the water bottle in the first image and the bike helmet in the second image.**



