



# SOLAR CANADA

ANNUAL CONFERENCE & EXPOSITION  
December 7-8, 2015 | Toronto, Ontario

## HOME OF THE FUTURE NET ZERO DESIGN COMPETITION

### COMPETITION GUIDELINES

Teams of 2-4 people will be eligible to submit an application to participate. All team members must be identified during the first stage of the design competition. Should there be any changes to the submitted team during any stage of the competition; the organizers must be informed immediately.

By submitting an application to be considered for participation, teams agree to commit to all aspects of the design competition including full team attendance at Solar Canada on December 7-8<sup>th</sup> for judging and presentations. All travel arrangements will be the sole responsibility of the participants.

All stages of the design must be submitted by the deadlines outlined below. Failure to do so may result in disqualification from the competition.

The competition organizers reserve the right to cancel this competition due to insufficient eligible participants. A minimum of four (4) eligible teams are required for the final judging and presentation stage at the Solar Canada Conference.

### DESIGN COMPETITION REQUIREMENTS

Teams are asked to design a net zero/near net zero home based on the following parameters:

- Building use: residential
- Family size: 4 people
- Building size: 600 – 1,000 sq. ft.
- Service Water Heating: 50 gallons per person/day; 6,000 gallons/month
- Appliances: Washer & dryer, stove/oven, dishwasher, refrigerator
- Fuel/utility sources: teams are encouraged to use solar PV generation and solar thermal applications wherever possible

### DESIGN COMPETITION STAGES

#### STAGE 1 – Application

*(Due: no later than Sunday, November 15th, 2015; midnight EST)*

A 2-5 page application that includes the following:

- Brief overview of your reasons for submitting and your interest in this topic (mission statement)
- Brief biographies of team members
  - Their current school enrolled and program of study
  - Their role within the team (designer, energy consultant, etc.)
- Overview of basic design ideas
  - Fuel sources incorporated
  - Architectural and engineering approaches

#### STAGE 2 – Design Proposal & Presentation

*(Due: Tuesday, December 1st, 2015; midnight EST)*

A minimum five (5) page proposal that includes the following:

- Overview of design concept
- Complete layout of design (must include renderings)
- Material sources/technology incorporated
- Energy models from fuel sources
- Financial feasibility

If selected, a digital 30-minute presentation (PDF or PPT format) and poster board presentation must be prepared for the trade show.

The digital presentation must be submitted electronically to [programs@elsecanada.ca](mailto:programs@elsecanada.ca) by **December 1st, 2015; midnight EST** and should include an overview of the design proposal including visual designs.

A poster board presentation of the submitted design (displayed on a 4 high x 8 wide/1.2 m high x 2.4 m wide free-standing bulletin board) The poster board will be supplied, only the materials to be displayed must be received on the Solar Canada trade show floor by **December 6th, 2015 at noon EST**. Poster presentations should incorporate illustrative materials and large-print text (readable from a distance of three feet).

### DESIGN CONSIDERATIONS

Teams are encouraged to consider the following design features:

- Wall, floor, ceiling systems using advanced framing techniques
- Insulation R-values for walls, ceiling and floors
- Measures to avoid thermal bridging
- Window type, locations and R-values
- Door type, locations and U-values
- Hot water system and its efficiency rating
- Ventilation and heating/cooling systems and their efficiency ratings
- Roof size, pitch and orientation
- Construction materials that are readily available
- Monthly and annual energy use

[www.SolarCanadaConference.ca](http://www.SolarCanadaConference.ca)

To submit your application, email [programs@elsecanada.ca](mailto:programs@elsecanada.ca)



Presented by

