Energy Innovations Rules

Energy Innovations is a renewable energy design challenge for students (grades K – 12, and college/adult), which explores renewable energy technologies and climate science as applied to one's daily life or to a real-world problem.

Each 'team', which may be an individual or a group of 2 – 6 students, is responsible for designing and building a fully operational demonstration product that is powered by renewable energy, or creating an art piece that promotes renewable energy/climate science. The goal is to design and build/create the renewable energy project and then effectively and creatively communicate its attributes through a team-designed web page.

Energy Innovations Categories

Energy Innovations is an open-ended competition, in that any renewable energy project may be submitted. For judging purposes, projects will be grouped into classifications. The classifications are (but not limited to):

- Agriculture
- Clean Transportation
- Green/Energy Efficient Buildings (this category would include animal habitats formerly known as Critter Comfort Cottage)
- Solar Cooking
- Water Distillation and Purification
- Artistic Demonstration Projects that use renewable energy
- Fine Art that promotes renewable energy or climate science

These classifications are not exclusive–a project may be submitted even if it does not fit neatly into one of the classifications above. Furthermore, we reserve the right to add more classifications as the entries demand.

General Requirements for Construction Projects

1. Teams must use a renewable energy source to power their design.
2. There is not a physical size requirement. Projects may range from micro-electronic to very large.
3. Safety is of the utmost importance, and relates to the purpose of your design. For example, if your design is meant to be used outdoors, then all wiring and components must be suitable for outdoor use.
4. Batteries may be used in the design but are not required for applications that are meant to only work during the specific times when the renewable energy source is available.
5. Projects do not have to be practical or marketable by today's standards–whimsical or forward-thinking designs are encouraged.
6. All projects will be presented on a team/project web page that will be open to public viewing during EnergyWhiz.
6. The same design may be used for more than one year, but the design must have at least a

40% change over the previous year.

General Requirements for Fine Art Projects

The objective of a submission in the Fine Art category is to present renewable energy, energy efficiency and/or climate science in an entertaining, interesting, and informative way.

1. Any art media, technique, visual or performance art may be used.
2. The artwork must in some way promote renewable energy or energy efficiency, or increase public awareness in the climate crisis and/or climate solutions.
3. There is not a physical size requirement for the artistic creation; however, you must be able to present it effectively on a web page.
3. All projects will be presented on a team/project web page that will be open to public viewing during EnergyWhiz

Web Page Submission

Each team will populate a web page that showcases their project. Access to a Wordpress web page for the team to populate will be provided by the Florida Solar Energy Center. These pages will be used to judge the project, as well as be available for public viewing during EnergyWhiz. The web page **must** include:

- Team name
- School name
- First name(s) of students on the team (no last names on the public page!)
- Grade level of each team member (or adult)
- At least one photo of the finished project
- A link to a video (hosted on another site such as vimeo or youtube) that includes at a minimum a team member (or more than one) describing/explaining (5 minute maximum):
  - the finished project
  - the design/construction process
  - why this particular design was chosen
  - how this project helps in the fight against climate change (i.e. environmental benefits)
- Entries in the Solar Cooking category must also include photos or a video documenting food being successfully cooked in their solar cooker.

The rest of the web page may include anything the team wishes to promote their creation, and spark interest with the public in renewable energy and climate change issues. Some ideas of extras that the teams could use are:

- Public service announcement
- Video ‘ad’ for their product (i.e. sales pitch)
- Promotional/marketing materials such as a brochure, flyer
- Team performance (song, skit, jingle, etc)

These examples are not meant to be exclusive; students are encouraged to be creative using photos, fonts, colors, diagrams, and other design elements to populate their web page.
Note that any videos included on the web page cannot exceed 5 minutes in length.

Energy Innovations submissions are due April 23rd. The following week is reserved for judging the projects.

Competition Day

During the week of EnergyWhiz, May 3rd - May 7th, all Energy Innovations pages will be available for public view. Students are encouraged to share their web page address with family and friends, and to visit other teams' pages. Awards will be announced on May 7th.

Judging Criteria

Teams will be divided for judging into Divisions based on their grade/age (gr K-2, 3-5, 6-8, 9-12 and college/adult), and further divided by the Category of their entry.
Teams will be judged on their finished project, as well as how it is presented to the public. This will include the team's knowledge and informational materials as presented on their web page.

Additionally, the judges will be looking at:
Construction projects:

- Design Decisions–How well does the team understand their renewable energy source? How well thought out are the design decisions?
- Construction Technique–How well did the students construct their design?
- Design Function–How well does the design function according to team specified goals?
- Creativity–How creative is the project/design? Is it a novel or interesting solution to a problem?
- Informational Materials–Do the materials inform and inspire interest in the product?

Fine Art projects:

- Creativity and originality–Is the interpretation of the energy/climate theme unique, imaginative and inventive?
- Quality of the artistic composition and overall design (neatness and craft)
- Aesthetic quality, and overall impression (design, composition, color/tones)
- Concept, selection and application of materials. Does the work combine technique, expression and organization to achieve an effective interpretation of the theme?

All projects and their web pages will be judged on:

- Delivered Message–How well is the renewable energy technology, or climate message represented in the project, and the informational materials?
- Creativity of Design–How creative/attractive is the web page?
- Quality/level of digital technology used

Energy Innovation Awards

Awards will be given in each Category and Division.