



# RE-ENERGY CHALLENGE

*Become a Renewable Energy Engineer!*

**2024 - 2025**

The [Re-Energy Challenge](#) is a fun and engaging STEAM task where learners have the opportunity to build a working prototype of a solar oven, solar car, wind turbine, hydroelectric generator, biogas generator, electric vehicle, penny battery, flywheel model or another renewable energy prototype of their choice. By building their own prototypes, learners can see firsthand how applied science is helping create a more sustainable future. This package contains everything you need to complete and submit an entry for the 2025 Energy Revealed Challenge. Get inspired for your participation by taking a look through our [showcase of previous entrants!](#)

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Complete the following entry form and upload it to the submission page (accessed GreenLearning's [Re-Energy Challenge Page](#)) by **Friday, May 9, 2025 at 11:59pm PST**. Best of luck to you and your learners! If you have any questions or concerns at any time, please contact us at [programs@greenlearning.ca](mailto:programs@greenlearning.ca) or check out our [Frequently Asked Questions](#) page.

# Challenge Instructions

To participate in the 2025 Re-Energy Challenge, **make a copy of this document**, and please follow the steps below:

## **Step 1: Preparation**

Introduce yourself to the concepts outlined in the [Educator Resource](#), which features quick videos and summaries of renewable energy technologies.

We **recommend** completing a selection of learning activities from the [Re-Energy Program](#) to equip your learners with the necessary knowledge and skills for the challenge.

We have provided a few examples these resources below:

[What is Renewable Energy?](#)

[Introduction to Solar Electricity](#)

[Exploring Electric Vehicle Charging Stations in Your School or Community](#)

[Wind Turbine Simulator](#)

[Introduction to Hydro Energy](#)

[Exploring Energy Storage in Your Community](#)

## **Step 2: Choose Your Renewable Energy Technology**

For the challenge, you are tasked with building a working prototype of a renewable energy technology. Your prototype construction can be based on the construction plans for renewable energies provided below, or you can get creative and come up with a renewable energy prototype of your own. The following construction plans are just the beginning of possibilities for your Re-Energy prototype(s), and we encourage you to get creative!

[Electric Vehicle](#)

[Penny Battery](#)

[Flywheel Model](#)

[Solar Oven](#)

[Solar Car](#)

[Wind Turbine](#)

[Hydroelectric Generator](#)

[Biogas Generator](#)

## **Step 3: Share and Spread the Word**

Share your learning, planning, or action with your family, within your school, community, on the radio, on social media, or any other forms! Celebrate your learnings and accomplishments and educate others on how they can learn about renewable energies and take climate action!

We would love to see your Re-Energy Challenge process, tag [@GreenLearning](#) on [Twitter \(X\)](#), [Instagram](#) and [Facebook](#).

#### **Step 4: Submission**

Use the following checklist as a guide to help get organized for submitting all materials and forms by **May 9, 2025 at 11:59 pm PST**.

- Submission Checklist:**
- Re-Energy Challenge Package with completed Entry Form, Sharing Your Learning, and Reflection Questions
- Documentation of learners' working prototypes of renewable energy technology
- Supporting materials for judging, such as:
  - Copies of learner work and worksheets
  - Photos and videos of learners and their projects
  - Media Release Form(s) for individuals shown in photos or videos

**Use the Selection Criteria below to support your Challenge process.**

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Entries that meet the requirements outlined in the [Re-Energy Challenge Rules and Regulations](#) will be judged between May 12, 2025 and June 5, 2025. The first, second and third place submissions will be awarded cash prizes of \$1,000, \$500 and \$250 respectively. Winners will be announced online on June 5th, 2025.

# Selection Criteria

GreenLearning has recruited a panel of industry experts with experience and expertise on renewable energy technologies to judge and provide feedback on challenge submissions. This panel of judges will be evaluating submissions based on the following selection criteria:

Criteria	Level 4	Level 3	Level 2	Level 1
<b>Supporting Materials</b> <i>Evidence of Learning</i> <b>(15 Points)</b>	5+ photos, videos or learner worksheets were submitted demonstrating learner experience. <b>Between 12-15 points</b>	3-4 photos, videos or learner worksheets were submitted demonstrating learner experience. <b>Between 8-11 points</b>	1-2 photos, videos or learner worksheets were submitted demonstrating learner experience. <b>Between 4-7 points</b>	No photos, videos or learner worksheets were submitted demonstrating learner experience. <b>Between 0-3 points</b>
<b>Prototype: Construction and, Function</b> <i>Operation and Application.</i> <b>(10 points)</b>	A strong prototype design that is highly logical and excellently built including strong ability to harness renewable energy. <b>Between 8-10 points</b>	A good prototype design that is logical and well built including the ability to harness renewable energy. <b>Between 6-7 points</b>	Prototype design that is somewhat logical and built well with some ability to harness renewable energy. <b>Between 3-5 points</b>	Prototype design that is illogical and/or not built. Minimal to no inclusion of harnessing renewable energy. <b>Between 0-2 points</b>
<b>Prototype: Design and Creativity</b> <i>Creativity &amp; Sustainability.</i> <b>(10 points)</b>	Design is highly creative with excellent use of sustainable design and materials. <b>Between 8-10 points</b>	Design is creative with good use of sustainable design and materials. <b>Between 6-7 points</b>	Design is somewhat creative with some use of sustainable design and materials. <b>Between 3-5 points</b>	Design is not creative with minimal to no use of sustainable design and materials. <b>Between 0-2 points</b>
<b>Sharing Your Learning</b> <i>Communication and collaboration.</i> <b>(10 points)</b>	Learning was shared with clear educational intention and through multiple forms. <b>Between 8-10 points</b>	Learning was shared with some educational intention <i>and/or</i> through multiple forms. <b>Between 6-7 points</b>	Some learning was shared. <b>Between 3-5 points</b>	No learning was shared throughout this challenge. <b>Between 0-2 points</b>
<b>Reflection Questions</b>	Learner response displays a strong	Learner response displays an	Learner response displays some	Learner response displays minimal

<i>Creativity, critical thinking and knowledge mobilization.</i> <b>(10 Points)</b>	understanding of renewable energy technologies and is highly creative. <b>Between 8-10 points</b>	understanding of renewable energy technologies and is creative. <b>Between 6-7 points</b>	understanding of renewable energy technologies and is somewhat creative. <b>Between 3-5 points</b>	understanding of renewable energy technologies with low creativity. <b>Between 0-2 points</b>
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# Entry Form

Please tell us about yourself and your class. If more than one educator or group leader was involved please complete this form based on who will be the **main contact**.

***Although this section is not scored, it is mandatory that you complete this form.***

Educator's name:

Educator's email address:

Preferred Title:

School Name and Board:

School City:

School Province:

Educator and/or School Social Media Handles:

Number of Learners Participating:

Grade Level(s):

Subject(s) or Club Name:

Type and number of prototypes created:

List sustainable materials used (*ie. reclaimed cardboard & plastic bottles*):

Estimate of quantity and/or percentage of sustainable materials used in prototype construction:

## Sharing Your Learning

The following question can be answered by the **joined effort** of educators and learners and is **supported by the photos, videos, and other relevant materials** provided in your submission. Sharing learning may include social media platforms, school assemblies, school announcements, school posters, sharing within the school (*i.e. to younger grades*), community events, presentations to community leaders, local media coverage, or any other forms.

***This section is scored out of 10 points.  
Please see the Selection Criteria above for details.***

1. How did you share your experience learning about renewable energies and associated technology while participating in the Re-Energy Challenge? What did you do to help inspire others to take action? How many people did you reach as a result?

*Please break down the number of people you shared your learnings with and how you shared it.*

***Select the ways you shared/inspired others:***

- Social media - # of people reached: \_\_\_\_\_
- Blogs/Vlogs - # of people reached \_\_\_\_\_
- Community events - # of people reached \_\_\_\_\_
- Newsletters - # of people reached: \_\_\_\_\_
- Infographics, videos - # of people reached \_\_\_\_\_
- Workshops/Presentations - # of people reached \_\_\_\_\_
- Other: \_\_\_\_\_

***Total # of people shared with: \_\_\_\_\_***

# Reflection Questions

The following questions **must** be answered **by learners**, either individually or as a team and can be submitted in any media form (written, video, slideshow, song/rap, etc.).

***This section is scored out of 10 points total. Please see the Selection Criteria for details.***

- a) How has building a working prototype of a renewable energy technology helped you better understand renewable energy and their possible uses at your school or in your community? ( /5)
  
  
  
  
  
  
  
  
  
  
- b) Reflecting on your experience with your prototype(s), If you had the opportunity to design and construct your prototype again what changes or improvements would you make? What is the reasoning behind your changes and how do they improve your prototype? ( /5)

# Educator Feedback

GreenLearning is consistently looking for ways to improve our challenges and collect participant feedback. Please take a few moments to tell us about your experience by answering the questions below.

***This section is not scored, but we greatly appreciate your feedback!***

## Efficacy of Challenge & Supporting Resources:

*Please complete the table regarding the efficacy of the Challenge and associated learning:*

	Not Effective	Somewhat Effective	Effective	Quite Effective	Very Effective
Developing learner understanding of renewable energies.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Building your confidence in teaching about renewable energies.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Providing learners the opportunity to demonstrate their understanding through action.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



### **Reflecting On YOUR Experience:**

Tell us about your experience as an educator with the Re-Energy Challenge:

*Did you face any barriers? Did it align with your objectives? Did you use the resources? Do you have suggestions? (this could include a testimonial for GreenLearning to use to promote learners' achievements and demonstrate how these challenges initiate learners to take action)*

### **Reflecting On LEARNER Experience:**

Tell us about your learners' experiences with the Re-Energy Challenge:

*Did they face any barriers? What were your learners most excited about? Do they have suggestions? (this could include a testimonial for GreenLearning to use to promote learners' achievements and demonstrate how these challenges initiate learners to take action)*

***Please use this opportunity to share any other questions, comments, or thoughts with us.***

## Congratulations!

Dear Parent / Guardian,

Your child's class, school, or eco club is participating in an exciting Re-Energy Challenge hosted by GreenLearning! It's a great chance for them to learn and work together with their peers to make a difference in the fight against climate change. Plus, they could win up to \$1000 for their school, amplifying the impact of their climate actions!

To help share their story and experience in the Re-Energy Challenge, please complete the attached media release form and return it to the school. This form gives permission to capture and include photos, statements, and projects created by the learners. More details can be found on the *Media Release Form* below.

More about us: GreenLearning creates free education programs about energy, climate change and green economy that engage and empower learners to create positive change for our evolving world. Our programs include both hands-on and critical thinking activities to equip educators with the educational tools they need to help learners understand complex environmental issues.

### **For Your Attention:**

**\* Please Sign and Return the Media Release Consent Form on the following page.**



**SCAN the QR codes below for more info!**



**Website**



**Challenges**



**Showcase**

## **GreenLearning's Challenges: Media Release Consent Form**

**Sign and return to secure your child's participation!**

Due date: \_\_\_\_\_

I, \_\_\_\_\_ hereby  
(Name of parent or guardian if participant is a minor, under the age of 18)

authorize GreenLearning Canada Foundation to use and publish my child's name, image, likeness, statements, participant work and performance without charge, for public viewing and promotional purposes in publications, advertising, video, web, new media and other formats as determined by the organization. I also give permission for any content as uploaded to the Google shared folder associated with GreenLearning's programs or challenges to be used and/or edited as required.

I am aware that my child's name and/or picture and/or voice may appear in a print advertisement or other promotional material or be shown on the internet on which my child's picture can be seen or voice heard on a recording and I hereby grant permission to GreenLearning Canada Foundation to use my child's picture, voice, and/or name for these purposes.

I hereby waive any right to inspect or approve the use of these works or any electronic materials that may be used in conjunction with them now or in the future, whether the use is known to me not. I also waive all rights to any royalties related to the use of these works.

I hereby release GreenLearning Canada Foundation, and its officers, employees, shareholders and directors from any and all liability whatsoever, for now and forever.

### **External Media and Special Events**

I also understand that external media or partner organizations might attend special events that are related to GreenLearning's programs and challenges. At these events, I give permission for my child's name, image, likeness, statements, participant work and performance to be photographed, filmed, audio or video taped for the purpose of being published and/or broadcasted online or on radio and television.

Please mark this checkbox if you **AGREE** for your child to be photographed, filmed, audio or video taped as mentioned or described above **in parts one and two.**

Child's name: \_\_\_\_\_

School: \_\_\_\_\_

Grade: \_\_\_\_\_

Teacher's name: \_\_\_\_\_

Parent's / Guardian's name: \_\_\_\_\_

Parent's / Guardian's email: \_\_\_\_\_

Parent's / Guardian's signature: \_\_\_\_\_

Date: \_\_\_\_\_