

Powering
up the Future
Competition

snowyhydro

SNOWSTEMACADEMY



INTRODUCTION

Welcome to the Snowy Hydro **Powering Up The Future Competition** 2024

The purpose of this learning support pack is to spark students curiosity about energy conservation and STEM pathways as Australia transitions to a renewable future.

Be a **Snowy Hydro futurist!** This job requires you to investigate what a renewable energy future can look like and through your findings and research provide a solution to reducing energy emissions.

The learning support pack includes resources and tools to aid in producing submissions that are innovative, insightful and creative. It also has been designed to assist teachers wishing to incorporate the competition into their classrooms and extend the learning experience to discover more about a renewable energy future.

This is your chance to take a deep dive into what a renewable energy future can look like!

We can't wait to receive your entries telling us about your innovative idea or inventive solution.

Have fun and good luck!



COMPETITION

Powering Up The Future

TASK: *Present an idea or invention that offers a solution to reduce emissions in a renewable world*

ENTRY

A completed entry will consist of two parts:

Part 1: Photo or video of invention/idea

Part 2: Written or video explanation of invention/idea (maximum 1-2 minutes or 300 words)

Note: Both components can be submitted as one piece

Entries must be submitted using the official competition webpage - [click here](#)

ELIGIBILITY:

This competition is open to all students Nationally in years 3 to 12 (aged 8 to 18 years old)

There will be two age categories Junior (ages 8 to 12 years old) and Senior (ages 13 to 18 years old)



COMPETITION CRITERIA

Powering Up The Future

ENTRY CRITERIA

The idea/invention will demonstrate a focus on innovation and creativity, and will be accompanied by an explanation of your idea either written or via video.

Part 1: Idea/Invention

We are looking for innovative, insightful and creative ideas/inventions that explore energy conservation to reduce emissions in a renewable world.

Part 2: Explanation of Idea/Invention

The accompanying explanation must be articulated clearly answering the three dot point questions:

- What is the problem you are addressing?
- What is your idea?
- How does it work?

Explanation to be 1-2 minutes in length or a maximum of 300 words, submitted either in video or written form.



JUNIOR PRIZES

There are lots of great prizes to win!

For this competition, there will be a judging panel and community choice voting. As a result, there will be two winners and two runners up for each age category (Junior and Senior).

Junior Winners:

- Overnight stay at Roar and Snore for the family, plus a behind-the-scenes tour of Taronga's Institute of Science and Learning and Immersive Classrooms
- 12 Month STEMgineers Kits Subscription

Junior Runners up:

- A Taronga Zoo Family pass, plus a behind-the-scenes animal experience.
- 12 Month STEMgineers Kits Subscription



SENIOR PRIZES

There are lots of great prizes to win!

For this competition, there will be a judging panel and community choice voting. As a result, there will be two winners and two runners up for each age category (Junior and Senior).

Senior Winners:

- Overnight stay at Roar and Snore for the family, plus a behind-the-scenes tour of Taronga's Institute of Science and Learning and Immersive Classrooms
- \$500 Gift card from Core Electronics

Senior Runners up:

- A Taronga Zoo Family pass, plus a behind-the-scenes animal experience
- \$250 Gift card from Core Electronics



SUBMITTING YOUR VIDEO ENTRY

Access the submission form [here](#) and enter your details in the spaces provided. Make sure you read each question carefully to be certain that all your information is correct.

Remember to include both **Part 1** and **Part 2** for your entry to be eligible.

Please ensure that you read and accept the Terms and Conditions.

Click here for tips on submitting your video

Terms and Conditions



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Learning Support Pack



SNOWY HYDRO

Click on the links to learn more about a renewable energy future

Snowy Hydro has been providing on-demand, reliable energy to Australia for 75 years. It began in 1949 with the construction of the Snowy Mountains Hydro-electric Scheme. Since then, the company has grown into an end-to-end, integrated energy provider leading the transition to a renewable energy future for Australia.

Our big nation-building renewable energy project, Snowy 2.0, is progressing at a rapid pace. Once completed, Snowy 2.0 will provide on-demand energy and large-scale storage for many generations to come.

Click on the links below:

[Our Company](#)

[Snowy 2.0](#)

[Red Energy](#)

[Renewables](#)

[Careers at
Snowy Hydro](#)

[Hunter Power Project](#)

[Latest Snowy 2.0
update video](#)

SNOWY HYDRO

Visit the Snowy STEM Academy online to learn more about Snowy Hydro

For foundation knowledge to provide context:

[Introduction to Snowy Hydro Module](#)

- Fact sheet
- Digital knowledge quest
- Knowledge quest lesson plan
- Snowy Hydro word frames - for our younger stage 2 students

[Snowy 2.0 Module](#)

For information about Snowy 2.0 and to provide context around what is happening with construction and why

- Fact sheet
- Digital pop-up book and knowledge quest
- Snowy 2.0 virtual tour and knowledge quest
- Knowledge quest lesson plan
- Spot the difference - for fun



GENERIC RESOURCES

Use the tools to support your research and produce the best entry you can

These student activity resources are the overarching tool that provides a scaffold for the learner to investigate foundation knowledge of renewable energy, build and map their idea around the topic area, develop research skills and produce their presentation.

- **Guided research tool activity** - [click here](#)
 - supporting the understanding of what is renewable energy
- **Ideas capture worksheet** - [click here](#)
 - This activity sheet is a generic collection sheet and is not prescriptive. The purpose of this document is the freedom to write, map or draw ideas in any way the student wishes to apply its use.
- **Storyboard planner activity sheet** - [click here](#)
 - The purpose of this activity sheet is to give the student freedom to write or draw while planning the order of their story in a sequential manner.
- **Poster Planning Tool** - [click here](#)
 - Using renewable energy as a focus. This document will help with order of thoughts when constructing a poster



JUNIOR RESOURCES (ages 8 to 12)

Use the tools to support your research and produce the best entry you can

These student activity resources are the overarching tool that provides a scaffold for the learner to investigate foundation knowledge of renewable energy, build and map their idea around the topic area, develop research skills and produce their presentation.

- **Energy Audit Activity Junior** - [click here](#)
 - This activity asks kids to become an energy conservation engineer and conduct an energy audit on a familiar space like a house or classroom to identify wastage or conservation of energy.
- **Energy conservation quiz activity sheet** - [click here](#)
 - This activity promotes independent thinking for kids to discern the difference between what is an energy saving or energy wasted action or practice.
- **Energy conservation activity answer sheet** - [click here](#)
 - Answers to the above energy conservation quiz



SENIOR RESOURCES (ages 12 to 18)

Use the tools to support your research and produce the best entry you can

These student activity resources are the overarching tool that provides a scaffold for the learner to investigate foundation knowledge of renewable energy, build and map their idea around the topic area, develop research skills and produce their presentation.

- **Energy Audit Activity Senior** - [click here](#)
 - The Energy Audit Activity (Senior) is a supporting activity to inspire students to understand daily emissions. This activity can be done at home, school or at any place that uses electricity.
- **The Clean Energy Regulator (CER)** - [click here](#)
 - The Clean Energy Regulator (CER) was established by the *Clean Energy Regulator Act 2011*. It is a non-corporate Commonwealth entity under the *Public Governance, Performance and Accountability Act 2013*.
- **Snowy Hydro Sustainability Report** - [click here](#)
 - This report sets out our Sustainability Program, which builds on our exceptional sustainability story to date
- **RED Energy Read a Bill** - [click here](#)
 - This helps you to understand how to read an electricity bill. This will help you understand your usage and how this is calculated



ALL ABOUT RENEWABLES

This slide provides overview content to assist you with your research into renewable energy. There are fun videos to watch and why not challenge yourself with a quiz all about renewable energy.

[Overview sheet](#) - written overview document on several renewables

[Renewables at Snowy Hydro](#) - key information on renewables

[Dundonnell Wind Farm — Tilt Renewables](#) - one of Snowy Hydro's contracted wind farms

Video resources on renewables:

- What is Renewable Energy? - [click here](#)
 - A concise explanation, citing six types of renewable energy
- Solar Focus with Khush - [click here](#)
- Renewable Energy Quiz - [click here](#)

Disclaimer: see slide 13



DISCLAIMER

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SUPPORT

For support please contact our Education Team:

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For more information visit

<https://www.snowyhydro.com.au/powering-up-the-future-competition>



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