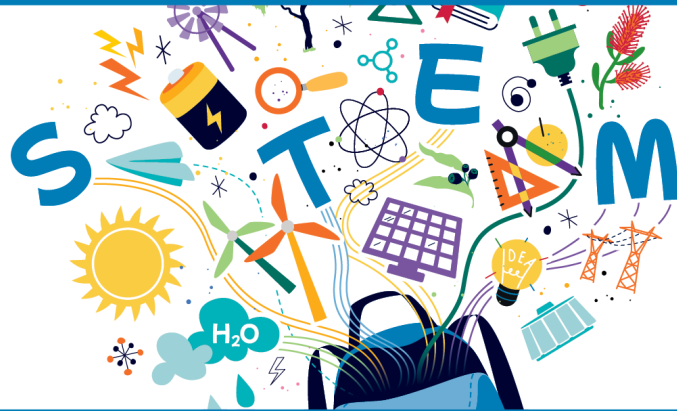


Powering up the future competition

Energy Audit

ACTIVITY | AUDIT SHEET

Age group: 13-18



Overview

This activity is designed to assist with collecting data to identify how energy-efficient your home, community centre or business is. By conducting an energy audit you can determine where energy is being wasted to better understand where to improve energy efficiency resulting in reduced cost and energy emissions.

Purchased electricity Emission Factors (EF)

| | | | |
|------------|------------|------------|------------|
| VIC = 0.85 | QLD = 0.73 | SA = 0.25 | TAS = 0.17 |
| WA = 0.51 | ACT = 0.73 | NSW = 0.73 | NT = 0.54 |

Australian Government Clean Energy regulator - National greenhouse and energy report

Updated 22 March 2024

Background information

In Australia, emission factors are used to estimate greenhouse gas emissions from various activities, such as energy production, transportation and industrial processes.

Find out more about how the Emissions Factor scale is used in Australia - [click here](#)

Let's get started!

Turn over the sheet to find an energy audit data and calculation capture sheet.

Take a close look at the space you have chosen to audit.

- What appliances are there, including lights?
- How often are they used? Once a week? Every day? Permanently going? Rarely or never?
- Think about the season Winter or Summer? Where is the energy being wasted? For example are all the lights left on after people leave the room?

Complete your data and calculation collection sheet by filling in the table below

Hint: Follow the colour coded calculation example to complete your calculations.

| Data Collection | | | | | | Data Calculation | | | | |
|---|---------------------|---------------------|---|------------------|---|---------------------------|----------------------------|---|--|--|
| Appliance and amount | Power rating (W) | Hours on per day | X | Days per year | = | Total hrs per year (T) | Watt hours (W x T) = Wh | Kilowatt hours (Wh ÷ 1000) = kWh | CO2e emissions per 1(kWh x EF) = CO2e (Kg) | Total KgCO2e emissions (CO2e x # of appliance) = Kg |
| Example: LED light bulbs (10) | 8 | 10 | X | 200 | = | 2,000 | 8 × 2000 = 16,000 | 16000 ÷ 1000 = 16 | 16 × 0.73 = 11.68 | 11.68 × 10 = 116.8kg CO2e |
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| | | | | | | | | | | |
| TOTAL = | | | | | | | | | KgCO2e | |