

One option to collect metering data, as a complement or an alternative to collecting bills, is to get households to read their own meters. This could be for electricity, gas or water.

You would have to get households to take readings before the intervention, and following the intervention. The timing of follow up readings should be guided by the type of behaviour that the project seeks to change.

One-off behaviours that are likely to lead to immediate and significant changes in resource consumption (eg. replacing electric hot water systems with solar hot water or gas hot water; installation of grey-water treatment system) can be monitored and evaluated by follow-up readings shortly after the intervention takes place. **Repetitive behaviours** that also lead significant changes in resource consumption, and that are not seasonally dependent, could also be monitored by follow-up readings after the intervention (eg. installation of low-flow shower heads and shorter showers).

Repetitive behaviours (eg. adjusting thermostat settings) and one-off changes (eg. installing insulation) that are seasonally dependent would ideally require follow-up readings to be taken twelve months apart so that seasonal differences in energy use do not confound the results. Even then, you may want to obtain seasonal weather information from the [Bureau of Meteorology](#) to see if there are any significant differences in between similar seasons (eg. heatwaves that lead to increase need for cooling) which may subsequently require you to make adjustments to your results.

There are some constraints in having participants reading meters. It may be hard to get participants to collect the data, as well as getting them to collect accurate data (depending on the type of meter). There may also be some self-reporting bias.

Readings can be entered into a table similar to the one below to calculate the daily average consumption. Readings should ideally be taken at least 7 days apart to average out any above or below average daily consumption.

BEFORE INTERVENTION DATA

FIGURE

DAILY USE (Reading 2-R

Reading 1
Reading 2

AFTER INTERVENTION DATE

FIGURE

DAILY USE (Reading 4-R

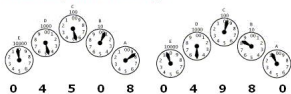
Reading 3
Reading 4

How to read an electricity meter

A home's electricity meter is usually found in a box on an outside wall at the front or down the side of a house. Instructions on how to read electricity meters can usually be found on electricity retailers' websites.

For example, visit the [Origin Energy How to Read Your Meter site](#) .

Electricity meter readings



Readings can be entered into the table provided previously. For example, reading 1 is 04508 and Reading 2 is 04980 and the readings were taken 21 days apart. The difference between the two readings is 472kW hours. This figure, divided by 21 days, equals around 22.5 kW hours per day.

BEFORE INTERVENTION DATA		FIGURE	DAILY USE (Reading 2-R
Reading 1	1 Feb	04508	
Reading 2	22 Feb	04980	$472/21 = 22.5 \text{ kWh/day}$

How to read a gas meter

The gas meter is often located on the ground below the electricity meter or near the front of the house. If the gas meter only shows numbers, the black and white numbers show the reading and any red numbers can be ignored.

Instructions on how to read gas meters can usually be found on gas retailers' websites. For example, visit the [Origin Energy How to Read Your Meter site](#) .

Take two gas readings at least one week (7 Days) apart and record details in the template box provided previously.

Reading a water meter

The water meter is usually located on the ground somewhere in a home's front garden.

Pros and cons of reading meters

Pros	Cons
Timely data collection (reading meters participants in evaluation studies)	Requires participant consent for data collection
Accurate data, if collected accurately	Requires consent from participants
	Location of meters may not be easily accessible, and meter reading may not be accurate
	Participants aware that they are being observed, which may effect intervention

Instructions on how to read water meters can usually be found on water retailers' websites. For example, visit the [Yarra Valley Water website](#) .

Two readings should be taken at least one week (7 Days) apart and recorded in the template box provided previously.