



Data Sampling Design Plan

Heyfield MyTown Microgrid

December 2020

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HEYFIELD
COMMUNITY
RESOURCE CENTRE





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- Heyfield Community Resource Centre
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- Public Interest Advocacy Group
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About the project

MyTown Microgrid is an innovative, multi-year, multi-stakeholder project that aims to undertake a detailed data-led microgrid feasibility for the town of Heyfield (Victoria), built on a platform of deep community engagement and capacity building. The project received funding under the Australian Government's Regional and Remote Communities Reliability Fund Microgrids stage 1 funding round. It also received funding from the Latrobe Valley Authority as part of the Gippsland Smart Specialisation Strategy

Disclaimer

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Executive Summary

The Heyfield MyTown Microgrid project aims to undertake a detailed data-led microgrid and energy solutions feasibility study for the town of Heyfield (Victoria), built on a platform of deep community engagement and capacity building. Over the three-year duration, the project will also develop the knowledge and tools to make it faster, easier, and more cost effective for other regional communities to understand the microgrid and other energy solution propositions for their community.

This document is the sampling design plan which is delivered as part of milestone 1.4 under Work Package 2: Technology Deployment.

Participants will be recruited to take part in the MyTown Microgrid project based on those willing to have Wattwatchers devices installed in their homes or businesses. These include the following targets in the Heyfield community.

- At least 75 residential sites with a mixture of consumption profiles and locations within the local network
- At least 12 commercial sites including the major timber sawmill sites and large consumption businesses
- 2 schools for incorporating an energy education program into the curriculum
- 3 public community dashboard displays for broader community engagement and project visibility

The Site Selection Criteria are based on the following principles:

- Distribution of sites around the Heyfield township and electricity network segments.
- Different types of home and small business.
- Sites with and without Solar or Solar and Battery Systems
- Key energy consumers in the region such as the large businesses such as the Sawmill sites.
- Number or capacity of measurable and controllable loads which may be beneficial for demand response (such as Hot Water, Battery Systems or Electric Vehicle Charging equipment)

Energy consumption data is being collected using Wattwatchers Auditor energy monitoring devices to help characterise residential and business sites for the purposes of modelling the Heyfield residents and to understand the feasibility of a microgrid or other community energy solution. These devices allow monitoring of up to 6 circuits at residential and business sites, including the main incoming grid connection (import and any export) and individual circuits with key loads and equipment such as solar and battery systems, air-conditioning, hot water and other major loads.

The Wattwatchers Auditor devices also have the option for control which may be used at some sites to test microgrid energy management and control concepts.

Data will also be collected from other sources including consumer profile questionnaires, electricity bills and aggregated electricity network data. The Data storage, ownership, transmission and use will be governed by the Wattwatchers Data Governance Framework and the UTS Research Ethics Process.

Access to the data obtained through this sampling design plan will be through the Wattwatchers Toolkit, MyData.Energy app, APIs and ADEPT IoT Platform to provide access to installers, individual consumers, businesses and the community as well as the research partners engaged in this project.

This data sampling plan is for the deployment of devices and capture of data to support the modelling of the potential microgrid and other energy solution options as well as supporting the key project outcome of the development of a community-facing Microgrid Decision Support Tool that form part of other workstreams in this project.

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Introduction

The Heyfield MyTown Microgrid project aims to undertake a detailed data-led microgrid and energy solutions feasibility for the town of Heyfield (Victoria), built on a platform of deep community engagement and capacity building. Over the three-year duration, the project will also develop the knowledge and tools to make it faster, easier, and cheaper for other regional communities to understand microgrid and other energy solution propositions for their community. This project takes a novel approach to a community-based microgrid feasibility process by:

- Using multi-data source platforms to calculate demand, flexibility and supply.
- Undertaking deep community and stakeholder engagement.
- Co-designing community-centric business models with enshrined benefits and consumer protections.
- Wrapping technical, market, economic and regulatory analysis into fit-for-purpose decision support tools

This document is the sampling design plan which is delivered as part of milestone 1.4 under Work Package 2: Technology Deployment.

The data collection process for Heyfield MyTown Microgrid has undergone careful planning, involving the establishment of clear and concise goals, the development of a model process, and the definition of a sampling design plan.

The sampling design plan describes the number of monitoring units and targeted areas/customer types for deployment, including the process for opt-in confirmation. It also includes the goals for data collection and describes the data collection process.

This document should be reviewed alongside the other relevant documents that describe the broader details of the project.

Sample design plan

A sample design plan is the road map that serves as the basis for the selection of the research sites, detailing the type of information that is being collected, who it is being collected from, why it is being collected, and how it is being collected. It begins with the goal for the data collection.

Goal

The overarching goal of the project is to understand the feasibility of a microgrid and other energy solution options for the town of Heyfield. To achieve this, data will be collected using Wattwatchers energy monitoring devices to understand more about the way the community uses, generates, and stores energy. This data will then be used to support techno-economic modelling and the development of a decision support tool. An additional goal is to use the data to drive deeper engagement with the community on energy.

Microgrid Overview

A microgrid is generally described as a decentralised group of electricity consumers and generators that may or may not be connected to the main electricity network (or “grid”) at a particular time depending on a number of factors such as energy demand, generation capacity and energy market conditions.

The participants in a microgrid are generally required to coordinate with one another to balance the electricity supply and demand to maintain a stable electrical system, particularly at times when the local system is separated or “islanded” from the main grid. This system must be maintained in real time and this coordination is normally performed by automated systems that have both centralised and decentralised control algorithms that control the generation and loads within the microgrid. Management of local demand and supply may also be required at times when the local system is grid-connected but constrained such as when the centralised grid is not able to provide the level of power quality and capacity required.

In the context of the Heyfield MyTown Microgrid project, the project area is defined by the existing electricity network in the Heyfield and immediately surrounding area including the main points of potential disconnection and aggregated monitoring of the greater Heyfield community. A Microgrid also generally incorporates different distributed energy resources and technology solutions that will part of the feasibility analysis of this project to understand the best microgrid and energy solution.

Local Electricity Network Overview

Heyfield, Victoria is located around 200km east of the Melbourne CBD and is in the AusNet Services electricity distribution and transmission network areas.

The Heyfield township and surrounding area are connected to the Maffra Zone Substation (MFA) which is approximately 15km away along a 22kV distribution network feeder. The 22kV is then stepped down for the customer connections to the 230/415V Low Voltage network at multiple Low Voltage transformers around the Heyfield area.

The 22kV feeder is expected to provide multiple points for aggregated monitoring and potential points of disconnection for consideration in the Microgrid modelling.

The preliminary public information available has been considered when developing the data sampling design plan to ensure monitoring points are selected within the relevant potential microgrid boundaries of the current local electricity network. Additional information from AusNet Services may also be reviewed as part of the project to be incorporated into the microgrid and energy solution analysis.

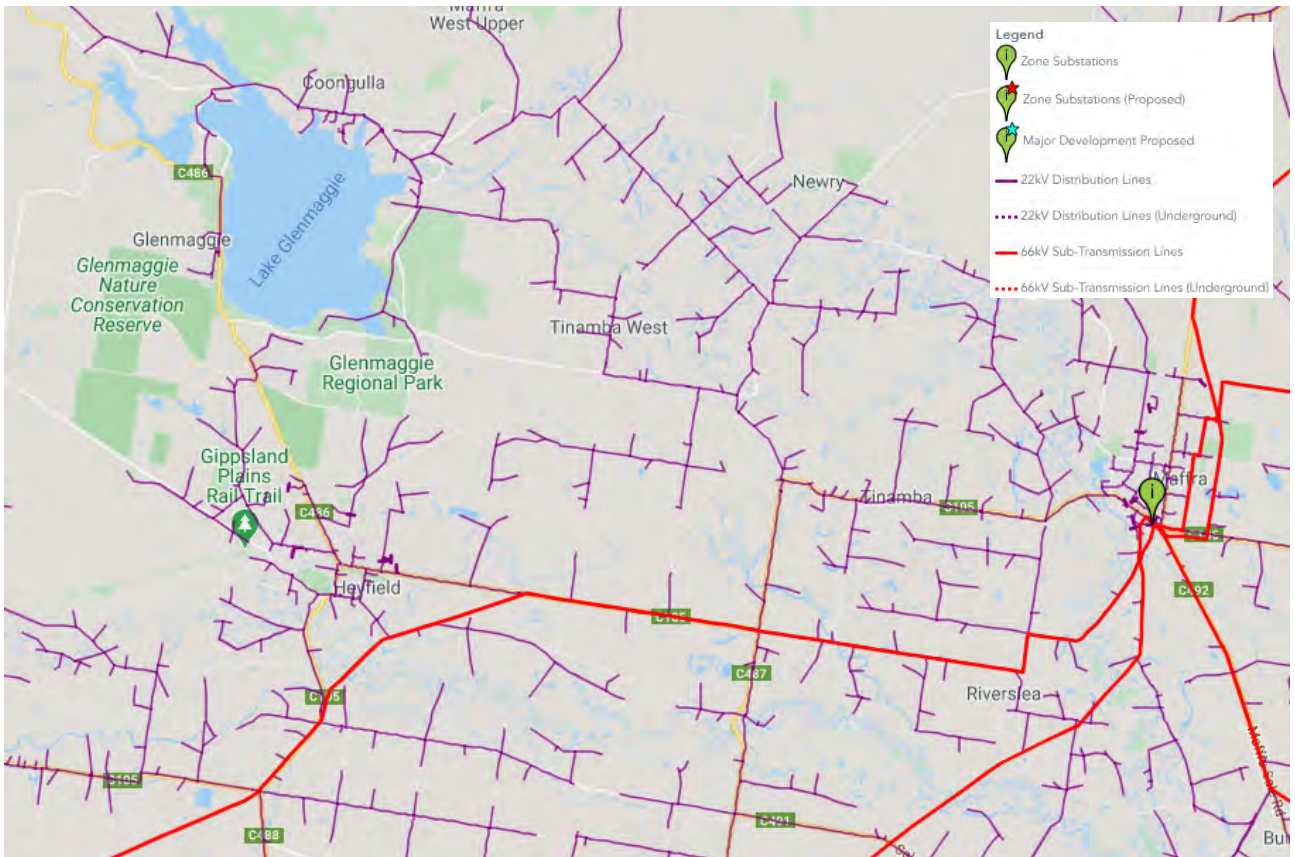


Figure 1 - Heyfield Region (left) and Maffra Zone Substation locations (Right)¹

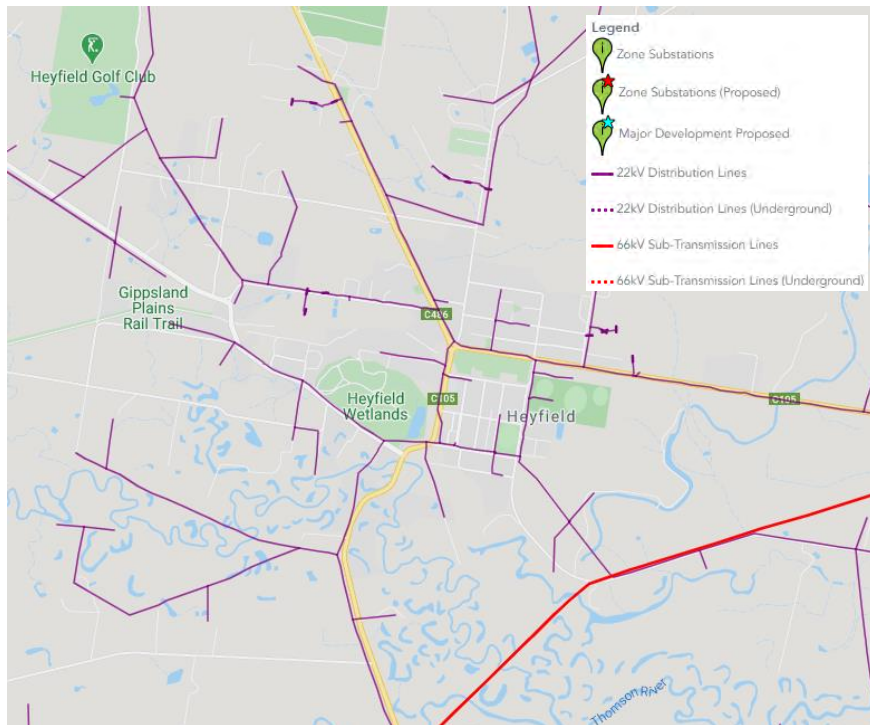


Figure 2 - Heyfield Township and Surrounding Region Electricity Network¹

¹ <https://dapr.ausnetservices.com.au/#>

Site selection

Sites will be accepted on a self-selection basis. That is, participants will be recruited to take part in MyTown Microgrid project based on those willing to have Wattwatchers devices installed in their homes or businesses and to provide additional information on house type and energy usage profile information, which may be via a questionnaire or an energy audit. Within these types it is also intended to have other targeted features within the sample.

The total number of devices being deployed is shown in the table below:

Table 1: Site Selection Breakdown

| Type of participant | Total number in Heyfield | Targeted number for trial | Other targeted features |
|---------------------|--------------------------|---------------------------|---|
| | | | 50% of non-solar 50% of solar |
| Residential | 700 | 75 | Low energy users (<20kWh per day) Medium energy users (20kWh to 40kWh per day) High energy users (>40kWh per day) |
| Commercial | 15 | 12 | Australian Sustainable Hardwoods and Gippsland Canningvale Timbers Sales as special key sites |
| Schools | 2 | 2 | |

The Site Selection Criteria are as follows:

- Distribution of sites around the Heyfield township and the local electricity network segments.
- Different types of home and small business.
- Sites with and without Solar or Solar and Battery Systems.
- Key energy consumers in the region such as large business (eg: the Sawmill sites).
- Number or capacity of measurable and controllable loads which may be beneficial for demand response (such as Hot Water, Battery Systems or Electric Vehicle Charging equipment)

There are additional considerations that will not necessarily exclude a customer but may delay or defer their involvement in the project including:

- Requirements for major electrical switchboard upgrades or replacements (at the customer's own cost).
- Restrictions accessing the property during the installation period of the project.

The Wattwatchers energy monitoring devices are expected to be installed between January 2021 and June 2021 and will continue to monitor data for the duration of the project. This will ensure that there is at least 12 months of data available for microgrid feasibility analysis during the final stages of the project.

Data for an individual device will start to become available on the same day it is installed, however considerations for potential re-identification of the site will be considered before external access to data is granted.

At the end of the project term, the Account Holders (participating consumers) may elect to continue with a new data services agreement or for the device to be deactivated and data collection to cease.

The participant recruitment processes are shown below.

Community Participant Recruitment Process (Residential)

| ACTIONS | 1. Awareness | 2. Consider/Research | 3. Registration | 4. Audit/ questionnaire & installation | 5. Operation | 6. Advocate |
|---------|--|--|---|--|--|---|
| ACTIONS | <ul style="list-style-type: none"> Word of mouth (HCRC, Installer, community members) Email and newsletters Posters, postcards, fliers Facebook Webinars Media releases Stalls at fairs/events Local media Public displays <p>(See the MyTown Microgrid Pre-feasibility Study for more information)</p> | <ul style="list-style-type: none"> HCRC (Drop in, Phone call) Facebook (HCRC) Websites (HCRC, MyTownEnergy microsite, Wattwatchers, ISF) Webinars <p>(See the MyTown Microgrid Pre-feasibility Study for more information)</p> | <ol style="list-style-type: none"> HCRC collect participant's personal details (name, address, phone number, email), gets a signed copy of consent form and answers any questions. HCRC adds details to a list in a secure shared document (Google Docs) List released to installer by Wattwatchers who actions the installation or ——— <ol style="list-style-type: none"> Participant enters details in online form (Hubspot) and signs online consent form. Details automatically added to a secure shared document List released to installer by Wattwatchers who actions the installation <p>————— and ——— Questionnaire/energy audit scheduled</p> | <ol style="list-style-type: none"> HCRC visits to fill in the questionnaire or undertake the Energy Efficiency audit, answer any further questions, and collect the consent form if not already provided. Installer phones to schedule date and time for installation The installer visits the participant's premises and completes the installation (unless the premise is not suitable). The installer updates the list in the secure shared document with device information The updating of the list triggers the creation of an account for the participant. | <ol style="list-style-type: none"> Participant downloads the Wattwatchers app Participant enter their details into the app to link their Wattwatchers device(s) to their account. Participant accepts the Wattwatchers T&Cs | <ul style="list-style-type: none"> Word of mouth |

Figure 3 - Community Residential Participant Recruitment Process

Community Participant Recruitment Process (Commercial)

| ACTIONS | 1. Awareness | 2. Consider/Research | 3. Registration | 4. Installation | 5. Operation | 6. Advocate |
|---------|--|---|--|---|--|---|
| ACTIONS | <ul style="list-style-type: none"> Direct contact from HCRC (phone call, meeting, Zoom call) <p>(See the MyTown Microgrid Pre-feasibility Study for more information)</p> | <ul style="list-style-type: none"> Optional follow up (Zoom call/meeting with HCRC, Wattwatchers, ISF) Facebook (HCRC) Websites (HCRC, MyTownEnergy microsite, Wattwatchers, ISF) Webinars <p>(See the MyTown Microgrid Pre-feasibility Study for more information)</p> | <ol style="list-style-type: none"> HCRC collect participant's business details (contact person, business name, address, phone number, email), and gets signed version of consent form. HCRC adds details to a list in a secure shared document (Google Docs) List released to installer by Wattwatchers who actions the installation or ——— <ol style="list-style-type: none"> Participant enters details in online form (Hubspot) Details automatically added to a secure shared document List released to installer by Wattwatchers who actions the installation | <ol style="list-style-type: none"> Installer calls participant, validates key requirements. Visit participant's site for inspection. If the participant's premises is suitable, the installer schedules date and time for installation The installer visits the participant's premises and completes the installation The installer updates the list in the secure shared document with device information The updating of the list triggers the creation of an account for the participant. HCRC arranges for an energy audit and/ or site questionnaire. | <ol style="list-style-type: none"> Participant downloads the Wattwatchers app Participant enter their details into the app to link their Wattwatchers device(s) to their account. Participant accepts the Wattwatchers T&Cs | <ul style="list-style-type: none"> Word of mouth Business's websites, newsletters, marketing and communications |

Figure 4 - Community Commercial Participant Recruitment Process

Data collection

Data is being collected using Wattwatchers Auditor energy monitoring devices to help characterise residential and business sites for the purposes of modelling the Heyfield residents and to understand the feasibility of a microgrid.

The Wattwatchers Auditor range of Energy IoT devices is the commercially proven solution suite, with over 40,000 units installed in the field, deployed across residential, commercial, industrial and utility use cases.

The Wattwatchers Auditor 6M is a compact and cost effective energy monitoring solution that is installed in the customers electrical switchboard to monitor up to 6 circuits with revenue-grade class 1.0 metering accuracy with 4G/3G communications to provide access to near-real-time energy data through the Wattwatchers Mercury platform and API.

The Wattwatchers Auditor 6M+3SW includes a switching option to provide control of up to 3 circuits for applications such as Hot Water, Pool Pump and Solar Inverter control to allow for testing of microgrid control capabilities during the project.

The Wattwatchers range support a wide range of Current Transformers allowing for measurements from below 60A for residential circuits up to 3,000A for industrial sites for flexible and granular energy monitoring.



Figure 5 - Wattwatchers Auditor 6 and Current Transformer Range

Wattwatchers devices collect energy demand, consumption and power quality data in two types referred to as Long Energy and Short Energy.

Long Energy values are recorded and stored on the device for up to 25 days and are transmitted whenever communications are available. Therefore, Long Energy data has a higher delivery guarantee, is delivered in sequence (i.e. no “gaps” except when the device is not powered on) and is made available via the Wattwatchers Mercury platform.

Five minute Long Energy data will be captured for kWh, Voltage, Current and Reactive Energy which is stored indefinitely (i.e. there are no time limits on availability via the API currently imposed).

Short Energy “streaming” data is useful for real-time visualisation and control and is recorded and stored only for a short period of time. It is sent with a “best-efforts” delivery model to the Wattwatchers platform and is not stored on the device and may not be delivered communications are unreliable or unavailable.

Thirty second Short Energy data will be captured for Voltage, Current, Reactive Energy and Frequency. This data is a best effort transmission and may have “gaps”. This data is stored in the platform for 31 days. The configurable Short Energy range of 5 to 150 seconds (as shown in Figure 6) will be set to thirty seconds (30s) for this project.

| | | KWh hours | Voltage | Current | Reactive Energy | Freq. | Min/Max | Guaranteed delivery |
|-------|--|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| 5 min | Long energy guaranteed delivery | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| | Short energy for real-time visualisation and control is instantaneous and configurable | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | |
| | 5 - 150 sec | | | | | | | |

Figure 6 - Wattwatchers Auditor Device Energy Measurement Intervals Capability

Up to 6 CTs will be installed at each site that provides the ability to capture the main incoming supply from the grid and up to 5 circuits for a single-phase site. The customer profile questionnaire provides additional supporting information about the loads connected to each circuit.

It should be noted that for a three-phase site, 3 CTs are required to monitor the incoming supply, and therefore only up to 3 additional circuits can be monitored if each are single phase. In the further case of a customer with a three-phase solar system, these 3 additional circuits are immediately consumed to monitor the solar (3 CTs for the main incoming supply and 3 CTs for solar monitoring).

At some sites it may not be possible to install up to 6 CTs due to the circuit configuration or space constraints within the customer switchboard.

For clarity, individual appliance consumption information below the circuit monitoring level, such as from Smart Plugs or Smart Appliances like Fridges, Dishwashers, and Laundry Washing machines is not currently planned to be used in this project.

In addition to the data from the Wattwatchers energy monitoring devices, other data will be collected in several forms by several methods, including:

- Site profile questionnaire (such as number of residents or employees and customers, occupancy profile, size and age of the property, information on heating and cooling and other key loads or sources of generation and energy storage)
- Consumer billing smart meter data (NMI level data)
- Electricity network aggregated monitoring points (such as data exported from SCADA systems)
- Consumer retail energy bills
- Regional weather information
- Solar irradiance data

The expected formats of data are described by their respective system documentation but as the techno-economic modelling platform is developed, these formats may change depending on its design and needs.

Table 2: Site data requirements

| Data | Details | Expected Format | Metadata requirements | Method of capture |
|-------------------------------|--|---|--|---|
| Site profile questionnaire | Collection of information on the site profile such as number of residents or employees and customers, size and age of the property, information on heating and cooling and other key loads or sources of generation and storage. | Online or manual survey (which may be conducted by energy auditor) CSV or XLS Output | Customer and site address information | Online Survey Phone or face-to-face collection |
| Site total load data | Time series data of the total electrical consumption of the site. This data is bi-directional import/export data for sites with embedded generation such as a PV Solar System. Units: kWh Resolution: 5 minutes | API CSV | Site Address Information | Wattwatchers devices Utility bill upload Smart meter data request |
| Individual circuit monitoring | Time series data of the electrical consumption of key AC circuits of the site. The order of priority is: 1. Grid Connection 2. Solar Generation 3. Battery Storage Systems 4. Electric Vehicle Charging 5. Air-Conditioning 6. Electric Hot Water 7. Pool Pumps 8. Oven 9. Kitchen Power Circuits 10. General Power Circuits 11. General Lighting Circuits This includes loads on site that may not be constrained in terms of time or rate of operation. Note that not all loads are required or may be possible at each site. Units: kWh Resolution: 5 minutes | API CSV | Site Address Information Circuit name Equipment information (such as type of equipment, manufacturer, model, electrical ratings) | Wattwatchers devices |
| Electricity cost information | Retail electricity cost and tariff information provided by the site occupant (customer). Units: \$/kWh and \$/annum | PDF API | NMI Site Address | Provided by site occupant (customer) by App, email or file transfer |

| | | | | |
|--------------------------------------|---|---------------------|-----|----------------------------------|
| Historical Energy Consumption | Energy consumption for a specific period (quarterly or seasonal) Units: kWh/period | CSV XLS NEM12 | NMI | Existing Electricity Smart Meter |
| Site Location | Street Address for locating where the site is connected to the electricity network. | CSV XLS API | NMI | Community Engagement (HCRC) |

This data will be used in the Data Model Process to support the development of a techno-economic feasibility and decision support tool for community microgrid or other energy solutions.

Data model process

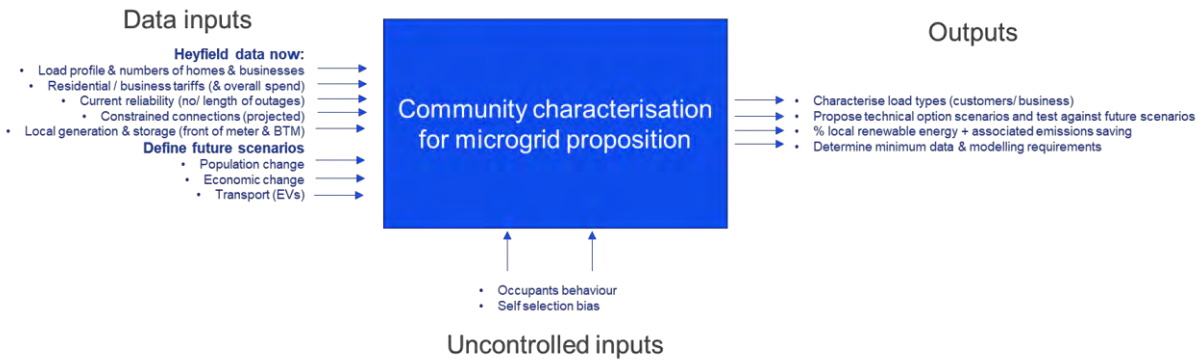


Figure 7 - Data Model Process

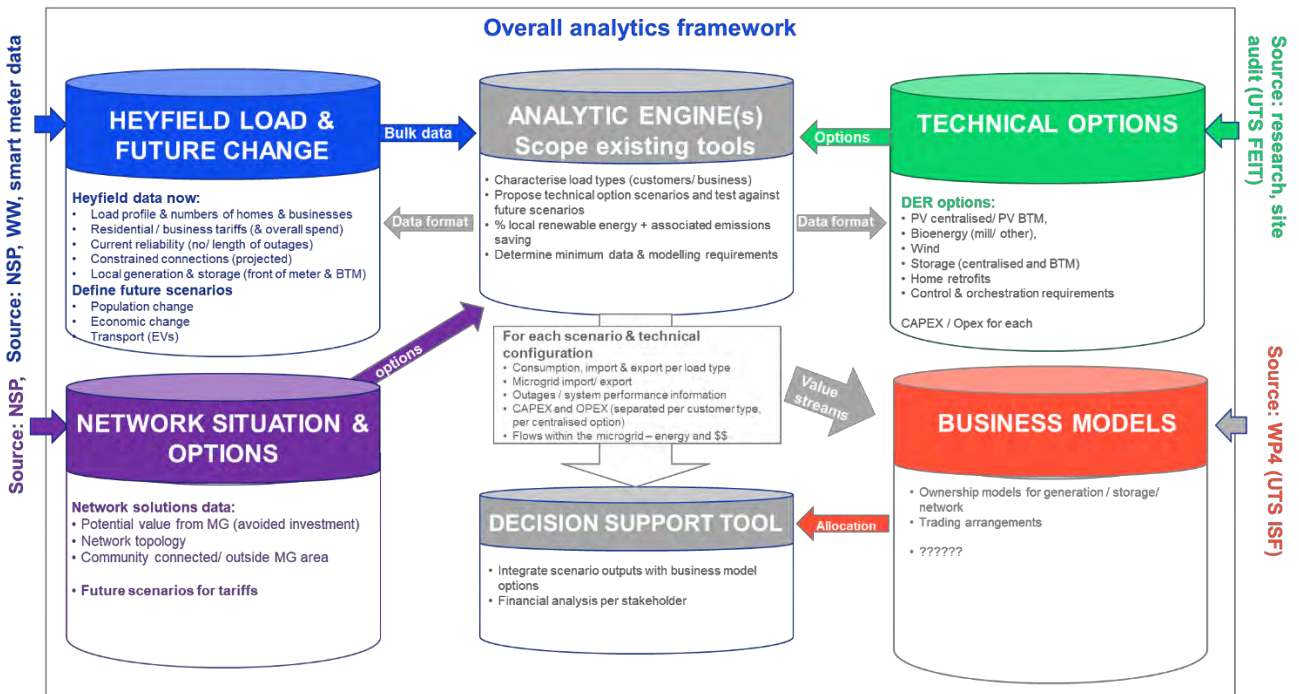


Figure 8 - Analytics Framework

Data storage, ownership, transmission and use

The storage, ownership, transmission and use of data will be governed by the Wattwatchers Data Governance Framework and the UTS Research Ethics Process.

Wattwatchers is committed to upholding strong, consumer-friendly data rights, and empowering the users of our services to better manage and execute these rights. This ethos is embedded throughout the development and implementation of the My Energy Marketplace (MEM) backed by grant funding from the Australian Renewable Energy Agency (ARENA), and the related release of the mydata.energy app, and also for the Heyfield MyTown Microgrid project supported by the Australian Government's Regional and Remote Communities Reliability Fund – Microgrids Program (RRCRF).

The scope of data access rights includes protections around privacy and security, freedoms such as the ability to access and utilise data, and permissions such as customer-approved sharing of data with third parties, including for financial or other benefits.

As a baseline, customer data will be collected and processed in accordance with the relevant jurisdictional laws in Victoria and New South Wales, Australia. This includes data covered under the Commonwealth Government's Privacy Act².

The Account Holder is a resident of the home who acts on behalf of the other residents or the owner of the business where the monitoring device is installed. The Account Holder must be made aware of any data being collected, and its intended use (scope of use, benefit received, and who will have access to it). Care will be taken to manage potential risks associated with seemingly innocuous data, such as risks or issues that may result in or from re-identification.

The Account Holder must provide informed consent for any use of their data by Wattwatchers or authorised third parties. Participants may opt out at any time, at which point the data monitor will be disabled remotely and the participant may also switch off the device. If participants withdraw before three months from the date of installation of their device, any data already logged will not be retained or included in the project. After three months data already logged will remain in the project database, but no further data will be included.

We make a commitment to transparency to Account Holders and Service users in the event of a breach.

Data will only be used for the purpose for which it was collected. If an additional use cases are identified, the Account Holder must be informed and opt-in to usage outside of the original scope.

Data recipients (such as research participants) will request and get explicit permission (i.e. opt-in) for the right to otherwise monetise the data received. This includes permission for a data recipient to benefit from aggregated, de-identified or derivative data.

When presenting information and tools to Service users, we endeavour to do so in an easy to understand way, avoiding legal and technical language as much as possible, and positioning information in practical terms. We strive to do so in ways that engage and support the needs of culturally and linguistically diverse (CALD) communities, across age groups, income capacity, literacy and numeracy levels etc.

As "owners" of their energy data, Account Holders are able to "take their energy data with them." For example, if an Account Holder changes energy providers or moves premises, their data (and associated rights) move with them. All data will be made available in a CSV or similar format that does not require specialist or commercial software to open and use, prior to leaving the service. This makes the Account Holder's data available to them if they choose to leave the Wattwatchers service. No "exit fees" will be charged to Account Holders in relation to data accessibility—e.g. to download their data for posterity—when leaving the service.

Wattwatchers provides near real-time access to data, wherever technically possible—e.g. for Wattwatchers devices, making 5 minute usage data available via the API within 5 minutes of it being generated (under normal operating conditions). Timeliness is dependent on the data source—e.g. smart meter data

² <https://www.oaic.gov.au/privacy/the-privacy-act/>

incorporated into the Wattwatchers systems may only be provided by metering companies on a 24-hour basis. In all cases, Wattwatchers will seek to limit delays of this nature.

The Wattwatchers data set is provided in a machine readable and accessible manner, via publicly accessible and documented APIs.

Wattwatchers will take steps to ensure that data under our care is managed securely, through our internal and technical systems (as outlined in our Information Security (InfoSec) Policy) as well as actively encouraging and supporting partners and data recipients to employ best practices and take appropriate steps to secure data that leaves our systems.

Given the nature of the Heyfield MyTown Microgrid project, and the inclusion of MEM devices in the mix of data sources for the project, Wattwatchers will undertake a collaborative “5 Safes” review process (e.g. workshop) with Data recipients to identify and address the nature of data collected and required, associated risks, and mitigation measures etc.

Please refer to Appendix 1 – The “5 Safes” framework, Appendix 2 – Customer Terms and Conditions and Appendix 3 – Draft Research Consent Form for additional information.

Methods of Access to Data

There are four main methods to access the data captured during this project to support the residential consumers, businesses and research teams engaged in the Heyfield MyTown microgrid project.

These methods are:

- **Wattwatchers Toolkit** – tools for onboarding devices, fleet management and dashboard visualisation
- **MyData.Energy App** – easy to use mobile device application for residential consumers
- **Wattwatchers API** – for access to near-real-time and historical data captured by Wattwatchers devices
- **ADEPT Platform** – for community dashboards and IoT Integration for access to data from both Wattwatchers and non-Wattwatchers devices.

Each of these methods is described in additional detail in the following sections of this data sampling design plan.

Other methods may also be developed during the project on an as-needed basis that are not covered in this document.

Wattwatchers Toolkit

The Wattwatchers Toolkit provides a solution to support the installation, configuration and operation of Wattwatchers devices.

Onboarding

The Wattwatchers Onboarding application is used primarily by the electrician installing the devices to configure the device and confirm it is operating normally before leaving the site. The app is optimised for use on a mobile device while on site but can also be used on a desktop computer for remote diagnostic or testing operations by support personnel.

The Onboarding application provides a simple workflow to allow the installer to name the site, check signal strength and configure the monitoring channels CT Ratio and names (such as grid, solar, hot water and so on) and perform final commissioning verification.

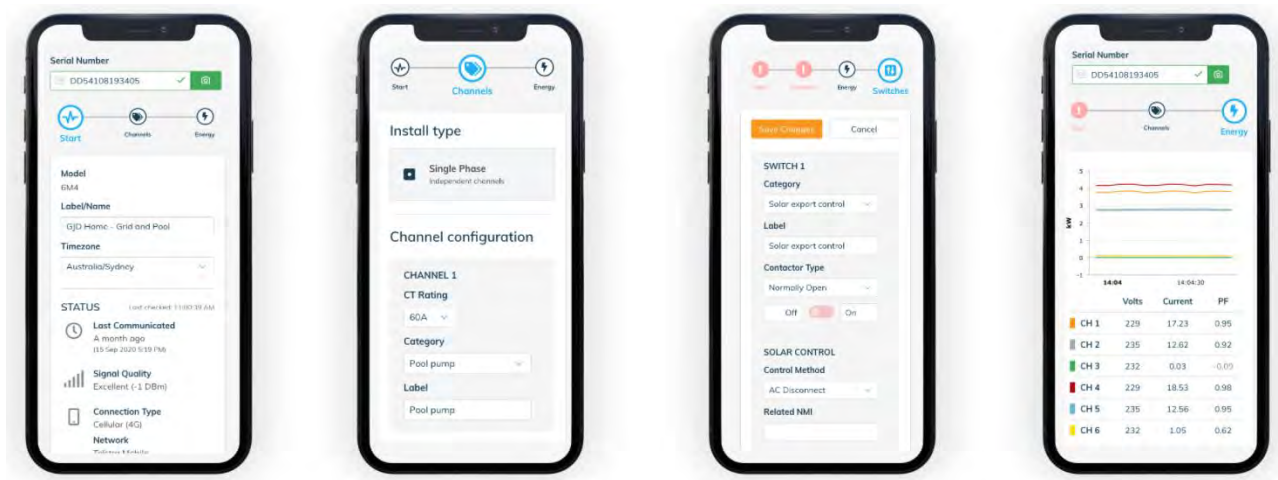


Figure 9 - Wattwatchers Onboarding Application

The Onboarding application provides the means to capture data relating to the configuration and installation of the Wattwatchers device – particularly the customer site name and the load type and labels of each monitoring channel that is important to the later stages of the data workflow.

Installers will receive training and access to the Onboarding application as part of the installer onboarding process. Other project participants will generally not require access to this tool.

Fleet

The Wattwatchers Fleet application allows the Wattwatchers project operations and maintenance team to monitor the status of devices in real time and diagnose any issues with devices installed.

The Fleet application leverages the data entered by the installer in the Onboarding app and provides the ability to confirm communications signal strength, firmware versions, the current energy readings and to enable and load control or switching devices if installed.

This allows support to be provided to both the installers in the field and customers to confirm energy readings.

Access to the Fleet tool is generally only available to Wattwatchers staff as part of the normal device operations and management activities.

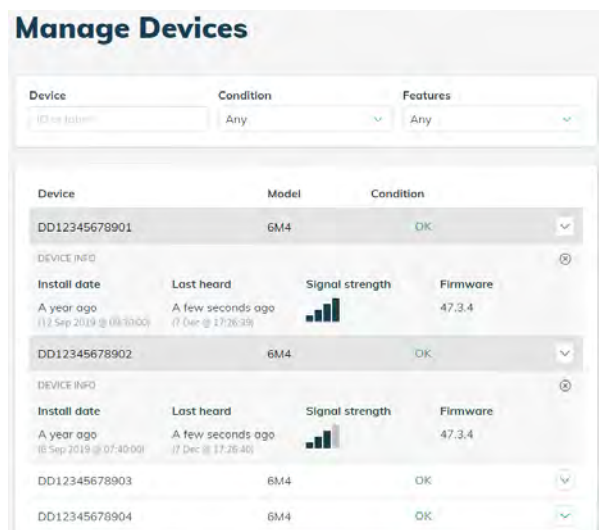


Figure 10 - Wattwatchers Fleet Management

Dashboard

The Wattwatchers Dashboard provides a web-based portal to access the energy data for consumers and businesses. The total consumption of the site at the grid connection or circuit level is shown and data can be viewed in flexible date ranges and downloaded in CSV, XLS or JSON formats for external analysis.

Data at the circuit level is also available to allow review of the detailed usage of each monitoring channel installed on the device. The Dashboard application can also provide a single user access to multiple sites which is often required for business customers.

An example demonstration residential site showing consumption and circuit level data for a 7 day period is shown below.

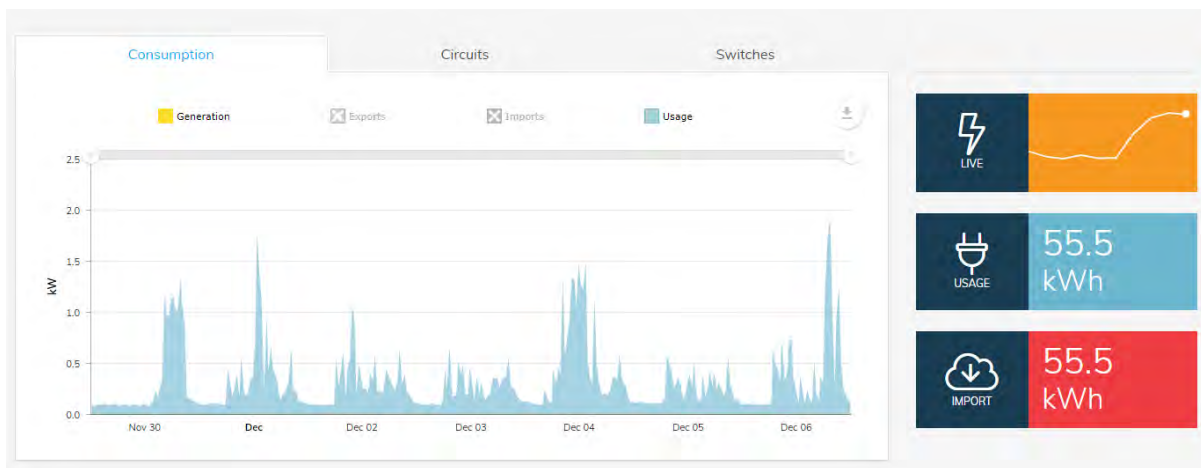


Figure 11 - Wattwatchers Dashboard Application Consumption View

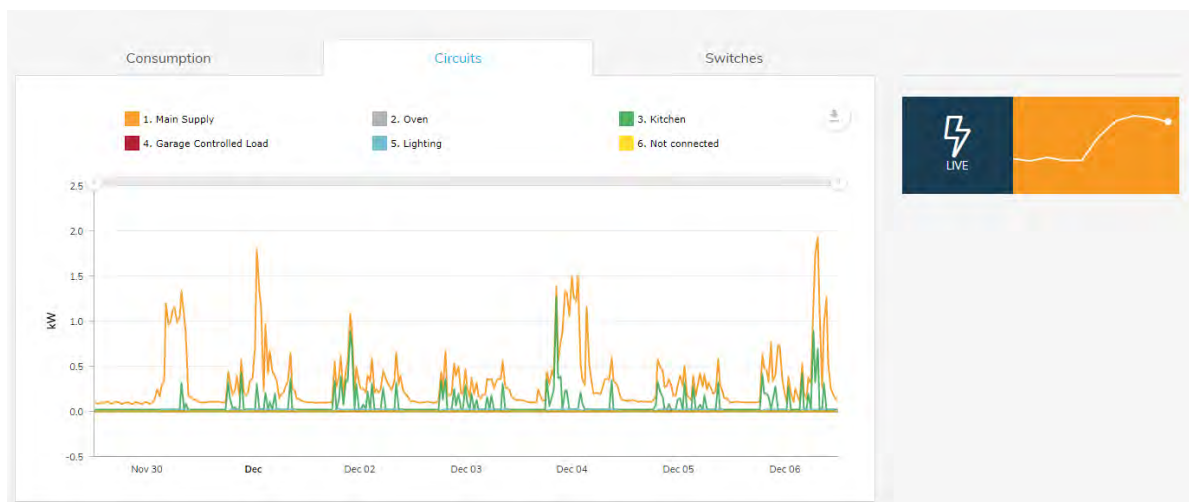


Figure 12 - Wattwatchers Dashboard Application Circuit Level View

Access to the Wattwatchers Dashboard will initially be provided to the residential occupants and business sites as part of the normal consumer onboarding and site setup process. This will only generally be a secondary method to access data if required (such as for those who have a computer but not a suitable mobile smartphone) as the MyData.Energy app will be the primary means for consumers to access their data.

Due to the identifying information that may be accessible in the Dashboard, access to individual sites will not normally be provided to research team members, but access to anonymised residential or commercial sites may be considered as the project progresses.

MyData.Energy App

The MyData.Energy mobile app has been developed by Wattwatchers³ to provide intelligent real-time energy management app for homes and small businesses.

The app has been developed primarily for residential users with a simple and intuitive interface to help consumers of various technical and energy proficiency levels engage and understand their energy use throughout the project.

The app includes the following key features:

- **See what's happening in your home now** - get real-time updates on what you're using, how much you're getting from the grid. If you have solar, see how much your system is generating and how much you're sending to the grid.
- **Work out what is using the most energy** - circuit-level monitoring so you can see what the big energy consumers in your home are. Pinpoint where you can get the most benefit by reducing your energy usage.
- **Make sure you're on the best electricity plan** - upload your electricity bill and we'll analyse and compare with the plans available in our marketplace. If you find a better deal, switch plans within the app.



Figure 13 - MyData.Energy app examples of real time consumption (left), circuit level monitoring (middle) and energy plan comparison (right)

The app is available for both Apple iPhone and Google Android devices and are available from the app store of each platform.

The app registration process also includes a step for the consumer to accept the terms and conditions of the project as described in Appendix 2 – Customer Terms and Conditions. However, these Terms and Conditions are also expected to be presented to and accepted by the customer as described during the early stages of the participant recruitment process.

Wattwatchers API

The data captured by Wattwatchers devices is available from a REST Application Programming Interface (API) that provides a common standards-based interface for access to data.

The API supports access to the Short Energy and Long Energy data described in the Data Capture section of this document allowing access to both near-real-time and historical data. This allows the data to be extracted for individual devices since installation at the circuit level for flexible microgrid and modelling and research purposes.

The online documentation can be viewed at <https://docs.wattwatchers.com.au>

³ mydata.energy is included in the My Energy Marketplace project that received funding from the Australian Renewable Energy (ARENA) as part of the Advancing Renewables Program. The views expressed herein are not necessarily the views of the Australian Government, and the Australian Government does not accept responsibility for any information or advice contained herein.

ADEPT Platform – Community Dashboards and IoT Integration

ADEPT is the Wattwatchers agile solutions suite for digitising distributed energy that combines real-time energy data with Internet of Things (IoT) capabilities, offering an agile technology platform for managing, optimising and aggregating distributed energy and assets.

ADEPT enables Wattwatchers and our clients to rapidly customise how they manage their fleet of devices, supporting integration and interoperability, with features including fleet analytic tools, real-time performance analysis, and 'zero-code' ways to fast-prototype and refine new analytics rules. This builds in flexibility at a time when technologies, standards and regulatory requirements are constantly evolving.

The ADEPT Platform provides a number of features including:

- Enterprise grade security
- Flexible data hierarchies
- Device management
- Advanced user management
- Any source of data
- Drag and drop business logic
- Customizable dashboards
- Machine learning
- Predictive analytics
- Automation and control



Figure 14 - ADEPT Platform Capabilities

The ADEPT Platform will be used to capture additional data for the Heyfield MyTown Microgrid project including energy and IoT integrations with other data sources, such as from AusNet Services aggregated network consumption data, weather data and may include data from solar inverters, controllers and other environmental sensors. It will also be used to develop community dashboards to display near-real-time metrics to the community such as total energy consumption and renewable generation aggregated at the community level.

The broad range of data input and output capabilities of the ADEPT platform allow for flexible methods and formats to support a range of data integration and access scenarios that will be required by the project.

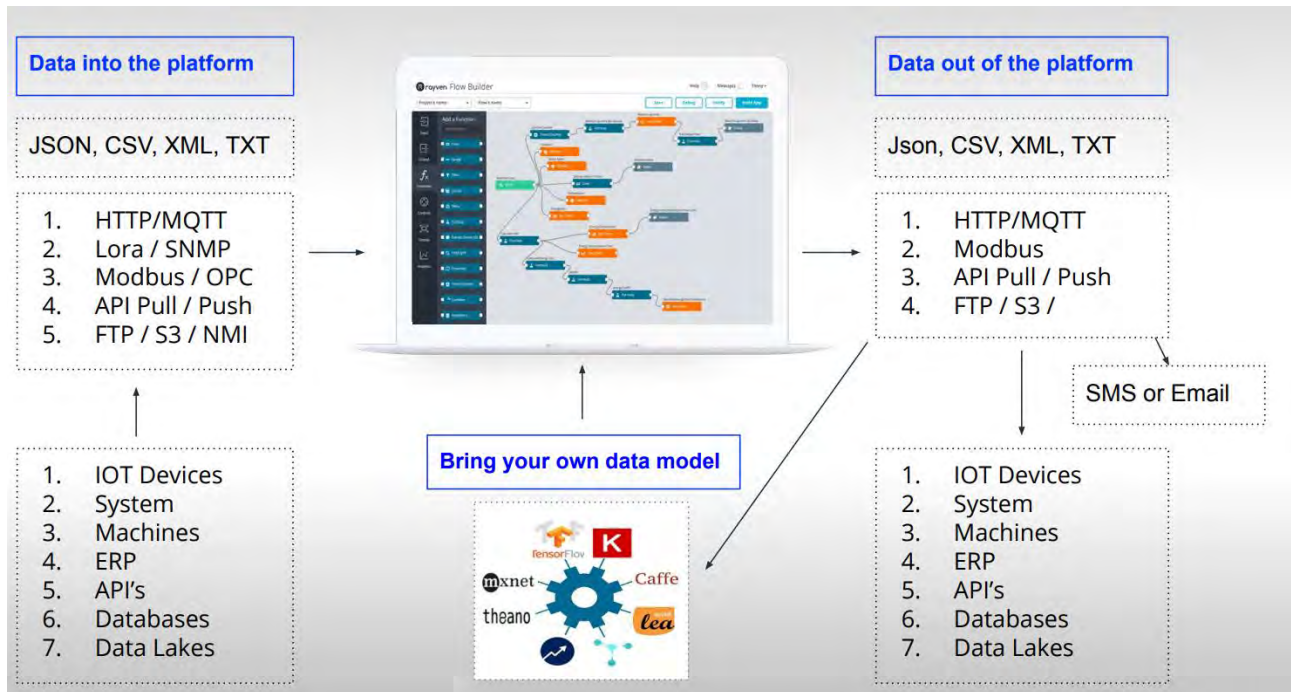


Figure 15 - ADEPT Platform Data Inputs and Outputs Capability

High Level Data Flows

The following is a simplified diagram of the high level flow of customer and energy data with respect to the research data sampling design plan.

The arrows indicate a nominal flow in a single direction of different types of data through the solution for the purposes of providing access to data for the residential and business consumers and the research systems that will be required to perform microgrid and energy solutions modelling and feasibility analysis.

This diagram is not intended to provide any detailed level information about how systems may be interacting or as a definitive solution architecture but is provided as a starting point for project participants considering their points of integration and data management requirements for the later stages of the project.

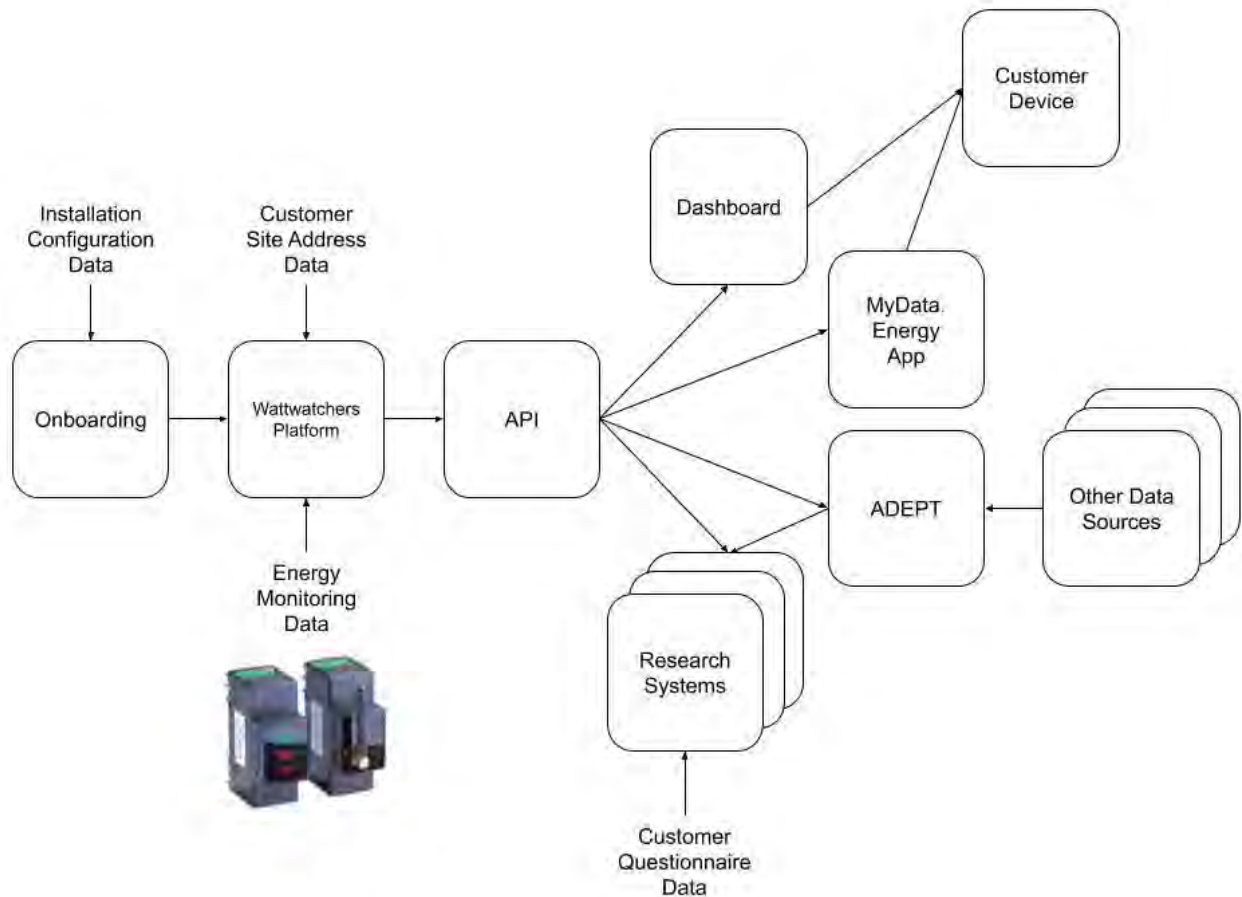


Figure 16 - High Level Solution Data Flows

Appendix 1: The “5 Safes” framework

The “5 Safes” framework, sometimes referred to as the “5 Principles.”

A good high-level introduction to this framework is *Sharing Data Safely*, published by the Office of the National Data Commissioner⁴, which includes this visual summary:

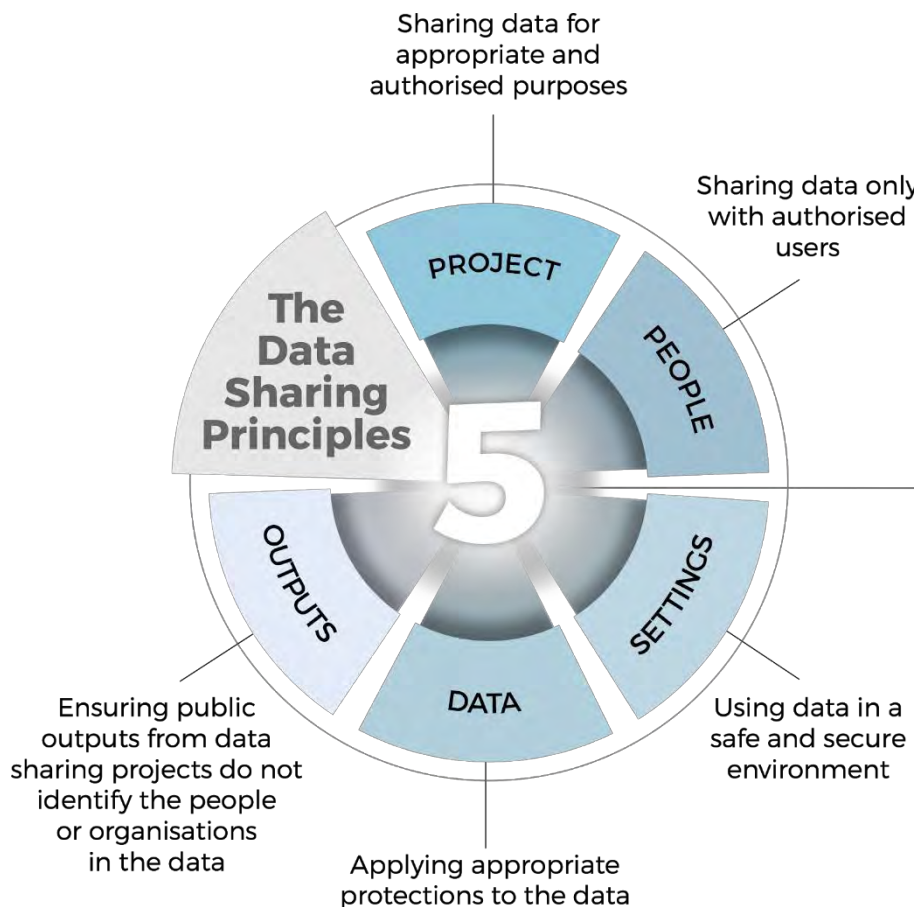


Figure 17 - The "5 Safes" Framework

For primary, customer-permissioned data sharing, the “5 Safes” framework can be considered to apply in the following (illustrative) manner:

| | |
|-----------------------------|--|
| <p>Safe People</p> | <p>Is the data recipient appropriately authorised to access and use the data?</p> <p>Participating organisations or individuals featured in the project will be pre-vetted by Wattwatchers before being permitted to participate in the project.</p> <p>Additionally, the relevant Service users (usually the Account Holder) will provide explicit permission for the use of data (thus, authorising the Data recipient to access).</p> <p>The technical systems implementing the OAuth-style permissioning model will “enforce” authorisation and availability only to “Safe People”.</p> |
| <p>Safe Projects</p> | <p>Is the data to be used for an appropriate purpose?</p> <p>Participating entities in the project will be pre-vetted by Wattwatchers before being permitted to participate in the project. Data recipients will need to agree to and uphold legal terms of use governing the use of data (Data Recipient Terms & Conditions). This provides a degree of “up front” protection to Account holders that a project is “Safe”.</p> <p>Additionally, the relevant Service users (usually the Account holder) will provide explicit permission for the use of data (thus, authorising the Data recipient to access). The</p> |

⁴ https://pmc.gov.au/sites/default/files/publications/sharing-data-safely-brochure-march-2019_0.pdf

| | |
|----------------------|--|
| | <p>Service user is thus able to evaluate what “appropriate purpose” means in their context (e.g. by the service/offer description and related terms and conditions).</p> <p>The relevant Service users will be able to review the Terms and Conditions of use for services and projects before choosing to engage with them.</p> |
| Safe Settings | <p>Does the access environment prevent unauthorised use?</p> <p>Wattwatchers’ information technology environment is covered by our Information Security (InfoSec) Policy which provides a number of safeguards appropriate to the data being collected.</p> <p>The project will continue to evolve and refine these measures through the introduction of the OAuth-style permissions system and, later, a greater structural reorganisation to further separate more- and less-sensitive data. (See Authentication and authorisation model earlier in this document for more on this topic.)</p> <p>Data recipient onboarding processes, employing tools like a “security requirements checklist,” will be implemented for any data recipients to ensure that minimum standards of recipient organisations/systems are met before participation is permitted.</p> |
| Safe Data | <p>Has appropriate and sufficient protection been applied to the data?</p> <p>Personal or identifying information will not be provided without the consent of the relevant Service user (usually the Account Holder). Only relevant and approved information will be provided. Where possible and appropriate, data will be deidentified. For example, a solar-sizing service does not necessarily need to know personal details to provide an appraisal. In such circumstances, energy data may be provided in an obscured way (e.g. using a randomly generated identifier).</p> |
| Safe Outputs | <p>Are the results non-disclosive?</p> <p>Most offers made through the app marketplace are anticipated to result in a direct one-to-one disclosure-for-service benefit. For example, allowing access to energy data to a third party so that they can provide a service or output to the Service user. Thus by definition the results are “disclosive” and therefore the concept of “safe outputs” is less relevant.</p> <p>However, for offers that involve data disclosures of many individuals to a third party—for inclusion in a research study, for example—the same measures for a data sharing arrangement relating to de-identified and aggregate data will apply (see below).</p> <p>That is to say, if a third party is requesting Service users participate in a research study, Wattwatchers will brief (through induction) and more directly work with the research lead to review and help ensure that to take necessary and reasonable steps to manage disclosure risk in their research (and related data) releases.</p> <p>Similarly, a community group that displays aggregate results of an energy saving initiative based on permissioned data will be guided to take appropriate steps to ensure that individuals cannot be identified (unless appropriate consent is attained), even if individuals have consented to participating in the initiative at the high level.</p> |

Appendix 2: Customer Terms and Conditions

The latest online version can be found at: <https://mydata.energy/terms>

MYDATA.ENERGY

Terms & conditions

This document outlines the legal terms for using the mydata.energy platform, app and service. mydata.energy is an intelligent real-time energy management application for homes and small businesses that operates independently of your power company's billing meter.

We ask your permission to collect, use, and share your energy and related data to provide the benefits of the app and related services to you.

We know it is critical that your data is treated securely and with respect. We apply these core principles to how we do things:

You control your energy data...

who can access it, and for what purpose—and you can take your data with you when you change electricity suppliers;

Your personal data is always treated in accordance with Australian privacy law...

and we don't share it with anyone else without your express permission;

All other data is used for the purpose for which it was collected only...

unless you provide your express permission to sharing beyond that purpose.

You agree to allow us to

Share non-personal, non-identifiable data we create or collect,

with third-parties on a commercial and non-commercial basis.

Send you notifications, in accordance with your preferences, about products and offers

that may be of value to you, based on your profile and your stated preferences. You are always free to accept or reject these offers.

We encourage you to understand your rights and responsibilities by reading the full Terms & Conditions (below). Please take the time to become comfortable with this contract prior to incurring costs of installation of monitoring device hardware and the services.

Some provisions protect Wattwatchers and are vital to allow us to provide the mydata.energy service. You may reject the T&Cs upfront, or withdraw your acceptance later, but if you do Wattwatchers will not be able to provide you with the mydata.energy service, or provide access to your data to third parties who provide services to you.

If you have any questions about the mydata.energy service, or how we propose to handle your data, please contact us at: info@wattwatchers.com.au.

Terms of use

We develop an energy data platform and app that provides energy-related functions and services for you to use.

The platform securely collects, processes and uses energy data.

These are our terms that apply to you if you use our app and services.

These are the terms and conditions (**Terms**) on which Wattwatchers Pty Ltd ACN 123 010 588 (**Wattwatchers**) gives access to and services through its application, device, cloud infrastructure and related software (together the **Platform**).

The Platform allows you to:

1. access your real-time energy data through a Wattwatchers or compatible device (**Monitoring Device**);
2. access an 'Energy App Store' to do things like view comparisons from energy retailers, share your energy data with Wattwatchers and third parties in exchange for subsidised products, and receive promotions from third parties; and
3. contribute to energy innovation by sharing your energy data through a 'Energy Data Hub', (together the **Services**).

Acceptance of terms

By using our app and services, you agree to these key terms, and to all of the terms below.

If these terms change, we will notify you.

Please read these Terms before accessing the Platform.

By accessing or using the Platform:

1. you agree to be bound by these Terms and to the collection and use of your information as set out in our Privacy Policy; and
2. you represent that:
 - you are at least 16 years old;
 - you are an Australian resident;
 - you are legally capable of entering into binding contracts; and
 - any information provided by you to Wattwatchers is truthful, accurate and complete.

Wattwatchers may change these Terms from time-to-time, for example in response to changes in the service or to our practices relating to our use of your data, by posting the updated Terms on our website, and by giving you reasonable notice of the amended Terms by email and/or through the Platform. You will be subject to the Terms that are published at the time when you access the Platform or Services. Your use of the Platform constitutes your acceptance of the Terms current at the time of use.

Limited licence to use the platform

You can use the app and services, but you cannot transfer your account to someone else.

Please do not sell or provide the app to other people.

Wattwatchers grants you a limited, non-exclusive, non-assignable, non-transferable licence to access and use the Platform and Services for your own personal, non-commercial purposes on the Terms. All rights not otherwise expressly granted by these Terms are reserved by Wattwatchers.

Restrictions on use

Please don't try to use the components of the platform to make your own version.

You cannot reproduce, copy, publish, sell or exploit any part of the Platform including the intellectual property rights in the Platform.

Accessing the platform

You'll need to set up a supported energy monitoring device and pair it with our service before the app and platform will work.

To use and access the Platform you must:

1. have a compatible Monitoring Device installed in accordance with Wattwatchers' instructions and relevant safety protocols and regulations;
2. download the Platform and set up an Account (defined in section Your Account below); and
3. pair the Monitoring Device with your Account.

Where your chosen Monitoring Device requires installation by a qualified electrician, Wattwatchers provides support to the installer and/or the relevant Wattwatchers partner.

Wattwatchers provides you with support for software applications related to the Platform either directly, or via our partners, as appropriate.

You can access our support services via the options outlined at <https://wattwatchers.com.au/support>, or via email at support@wattwatchers.com.au.

Monitoring device

You can get a monitoring device and arrange installation from us, or you can source and arrange installation from others. However, if the device installation isn't done correctly, the data you receive from it may be incorrect.

If you get your device installed by someone else, we can't be responsible for the installation of your device, or any problems created by incorrect installation—that's between you and the installer/other provider.

Your use of the **Monitoring Device** ('device') with the Platform is subject to your ongoing acceptance of these Terms.

A compatible device can be purchased from Wattwatchers, or from third party suppliers or resellers. If you purchase from third party suppliers or resellers, additional terms from those vendors may apply.

Wattwatchers will support device installers by making available to them a variety of documents and other tools to help with correct and accurate installation. However, if the device is installed by a third party, Wattwatchers has no responsibility for the proper installation of the device or your costs associated with the installation.

The accuracy of the data you receive from the device will depend on correct installation. Wattwatchers does not accept liability for any faulty installation of your device, nor liability for any costs that arise or opportunities that are lost in connection with the installation of your device, and is not liable to you if any of the information supplied through the device is incorrect.

If you move premises you will be responsible for the deactivation of your installed device, and installation of a new device at your new premises. If you move your device from one premises to another, Wattwatchers installation support and warranty provisions cease to apply. Deinstalling or reinstalling your device is at your own risk and expense, unless Wattwatchers has agreed otherwise in writing.

Your account

To fully use the services, you need to create your own account.

We will ask you to provide some personal information. We can only use your personal information in the ways we have set out in our Privacy Policy.

You cannot give your account to someone else, but if you want to let someone else

(e.g. in your household) access it, that's fine. Please tell them about these terms because they apply to everyone who uses the app.

You may access some functionality of the Platform without registering your details with us. However, to use the Services in full, you must register an account (**Account**).

To obtain an Account, you must be at least 16 years of age and you must not have been previously barred from using the Platform or receiving an Account.

To register your Account you submit to Wattwatchers your name, premises address, and email address. You may be required to verify your identity and address to Wattwatchers for your safety. All personal information you provide through the Platform will be handled in accordance with Wattwatchers' Privacy Policy.

You are responsible for any activity that occurs through your Account and you must not sell, transfer, license or assign your Account to anyone else.

You may not create an Account for another person without their express permission, or hold more than one Account without Wattwatchers' written permission. You are solely responsible for the confidentiality and use of your username and password. If you become aware of any unauthorised use of your Account, or unauthorised disclosure of your username and password, you must notify Wattwatchers immediately at support@wattwatchers.com.au.

If you allow another person to access or use your Account, you must make them aware of and comply with the Terms.

Data

By agreeing to these terms and using the platform and app, you are giving us permission to do the following things with your data:

- 1. share it with the organisations that help us provide our services (think IT, marketing)**
- 2. de-identify it so it's not connected to you personally and then:**
 - use it or allow our partners to use it for research and analysis**
 - use it to identify products that we think you might like to hear about**
 - sell services to others based on this data**

Only if you provide explicit consent, we may also provide your information to others on your behalf, so that you can more easily receive benefits and services that you are interested in

We collect your data, including personal information, in accordance with our Privacy Policy, to provide you with Services. This may include sensitive information, for example if you tell us that you have a health condition that impacts the Services you need.

You agree that we may:

1. disclose your personal information, including any sensitive information where you have consented to that disclosure, to our third party service providers solely for the purpose of assisting us to provide the Services;
2. use non-identifiable data from the Platform for research, analytics, and to improve the Platform;
3. utilise or share anonymised data with our partners for research and analytics, and to identify and highlight products and services that may be of interest to you;
4. collect and use de-identified energy data transmitted by your Monitoring Device, including for commercial purposes; and
5. show you offers and promotions from third party vendors (**Vendors**) in accordance with your notification preferences. Vendors may request access to your personal or energy data in order to fulfil those offers or promotions. We will not share your data with these Vendors unless you expressly consent.

In-platform promotions

You get to control who has access to your data and whether we share it with other vendors.

If you receive an offer from the app, that offer is for you and your household only.

If the offer is provided by one of our app partners (that we call Vendors), they are responsible to you for the offer, not us.

If you elect to share your data with Vendors, any offers or recommendations made through the Platform are personal to you and you may not transfer these offers to any other person.

Wattwatchers is not liable for services, products or performance by a Vendor introduced to you via the Platform. For instance, Wattwatchers is not liable to you if you do not achieve any actual savings or rewards after participating in a Vendor promotion or signing up to an energy supplier recommended through the Platform.

Content

Please don't use any of our trademarks or branding without our permission.

We welcome your suggestions for making our app or services better.

Images, trademarks, service marks, logos and icons displayed on the Platform are the property of Wattwatchers or its licensors and may not be used without Wattwatchers' prior written consent. You agree that you will not copy, publish, reproduce, disseminate, offer for sale, sell, or reverse

engineer the Platform, or Platform content.

Any unauthorised use of any Platform content, whether owned by Wattwatchers or third parties, may violate intellectual property rights subsisting in the Platform, including copyright laws, trademark laws, privacy and publicity laws and communications regulations and statutes.

Any feedback you give Wattwatchers, including in-Platform ratings, is given voluntarily, and you transfer any intellectual property rights in that feedback to Wattwatchers, who is free to aggregate, disclose, reproduce, or otherwise use the feedback as it sees fit.

Links and communications

You may be able to access some links through the app that take you to other organisations' sites or content. We are not responsible for what those links contain or provide.

Wattwatchers may send you emails or notifications, including notice of changes to the Platform or Terms relating to your Account.

Wattwatchers, its partners and affiliates, and if you agree Vendors, may send you emails or text messages about promotions or offers. All commercial electronic messages will include an unsubscribe facility.

The Platform may contain links to third-party partner publications, or services that integrate with the Platform, products sold by other companies, and materials that are not owned or controlled by Wattwatchers. Wattwatchers does not recommend, endorse or assume any responsibility for any such third-party sites, information, materials, products, or services.

If you click on a link in the Platform that redirects you to a third-party Platform, site or content, you become subject to that third party's terms and conditions, and Wattwatchers is not responsible or liable, directly or indirectly, for any damage or loss you suffer in connection with your use of or reliance on any third-party content, goods or services.

Prohibited uses

Please don't do anything illegal on the app. Don't pretend to be someone you're not, don't post any offensive material, or try to break anything. If you do, we'll have to take away your account.

We reserve the right to refuse service to anyone if they break the rules, but we will provide appropriate notice and let them know why.

You agree to use the Platform in accordance with all applicable laws and regulations. Wattwatchers may investigate or terminate your use of the Platform if you have misused the Platform, Services, or have behaved in a way which is illegal or is regarded by Wattwatchers as inappropriate.

You agree that in using the Platform you will not:

1. impersonate any person or entity;
2. use any technology or process to retrieve, index, 'data mine', reproduce, reverse engineer the Platform or its contents;
3. use any material, trademarks, or other proprietary information without obtaining the prior written consent of the owner;
4. remove any copyright, trademark or other proprietary rights notices contained in the Platform;
5. interfere with or disrupt any Services provided through the Platform;
6. post, email or otherwise transmit any material that contains software viruses or any other code, files or programs designed to interrupt, destroy or limit the functionality of any computer software or hardware or telecommunications equipment;
7. forge headers or otherwise manipulate identifiers to disguise the origin of any information transmitted through the Platform; or
8. 'frame' or 'mirror' any part of the Platform, without Wattwatchers' prior written permission, or use meta tags or code or other devices containing any reference to Wattwatchers or the Platform in order to direct any person to any other website for any purpose.

You further agree that your information and your interactions on the Platform shall not:

1. be false, inaccurate or misleading (directly or by omission or failure to update information);
2. infringe any third party's rights, including but not limited to intellectual property rights, confidentiality, proprietary rights or rights of publicity or privacy;
3. contain any viruses or other computer programming routines that may damage, interfere with, intercept or expropriate any system, data or personal information;
4. violate any laws;
5. be defamatory; or
6. create liability for Wattwatchers.

Wattwatchers reserves the right to refuse to give access to and license the Platform to any person who does not comply with the Terms.

Exclusion of warranties

We are doing our best, but we can't guarantee that the app is the right app for you, or that it will work all of the time.

Wattwatchers provides the Platform "as is" and "as available". Wattwatchers does not warrant the accuracy, completeness, currency or reliability of the Platform, Services and content.

Wattwatchers expressly disclaims all warranties, representations, conditions, undertakings or other obligations including any implied warranties of merchantability, fitness for a particular purpose, non-infringement and any warranty that the Platform, the Service or Wattwatchers content will be error-free.

Any Wattwatchers content or other material downloaded or obtained through the Platform or Services is done at your sole risk, and you are solely responsible for any damage to your computer system, device, or loss of data that results from the download or accessing the Platform.

Limitation of liability

We're not liable for various things. For example, we aren't responsible if the app isn't working when you need it and that causes an issue. We also can't be responsible if a Vendor doesn't deliver on a promise they made to you.

If you do have an issue that you think is our fault, please let us know so we can try to work it out together.

You expressly agree that Wattwatchers is not be liable for any direct, indirect, incidental, special, consequential or exemplary damages, including but not limited to, damages for loss of profits, goodwill, use, data or other intangible losses (even if Wattwatchers has been advised of the possibility of such damages), resulting from:

1. your use of, or the inability to use, the Platform;
2. a Vendor's provision, or failed provisions of, products or services ordered through the Platform;
3. the cost of procuring substitute products or services in the event you are dissatisfied with the products or services ordered from a Vendor through the Platform;
4. an inability to access or use products, services, or information purchased or obtained through or from the Platform or Services;
5. any unauthorised access to or alteration of your transmissions or data; or
6. any other matter relating to the Platform or the Service.

You acknowledge that Vendors offer and provide services through the Platform, and that any dispute about those services or goods is solely between you and the Vendor. Wattwatchers is not liable in any circumstances for the quality or non-provision of items or services offered or provided by a Vendor.

In no event shall Wattwatchers' total liability to you for all damages, losses, and causes of action whether in contract or tort including, but not limited to, negligence, or otherwise exceed the amount paid by you, if any, for accessing the Platform.

Some jurisdictions do not allow the exclusion of certain warranties or the limitation or exclusion of liability for incidental or consequential damages. Accordingly, some of the above exclusions and limitations will only apply to the extent permitted by law.

Disclaimers

We are building the best app and service (platform) we can for you, but we can't promise it will run well all of time or be perfectly uninterrupted.

We can change or improve the way the platform functions over time.

While we hope it never happens, we can discontinue the app, platform and related services if we need to.

The Platform and Services may be temporarily unavailable from time to time for maintenance or other reasons. Wattwatchers assumes no responsibility for any error, omission, interruption, deletion, defect, delay in operation or transmission, or communications line failure.

Wattwatchers is not responsible for any technical malfunction or other problems related to or resulting from using or downloading the Platform or materials in connection with the Platform or in connection with any products or services offered through the Platform.

Wattwatchers may discontinue or alter the Services or the Platform, remove content from the Platform, or restrict the availability of the Platform.

Where possible Wattwatchers will provide you with reasonable advance notice of changes or expected unavailability to the platform (e.g. for system maintenance).

Release and indemnification

You agree that you won't proceed with any legal claims against us.

However, if we are sued because of something you do using the platform, you have to pay our costs.

You agree to release Wattwatchers (including its members, managers, officers, employees and agents), from all liability and obligations related to your use of the Platform or the Services.

You agree to unconditionally indemnify and hold harmless Wattwatchers (including its officers, members, directors, employees and agents) from and against any liabilities, damages, losses or expenses, including reasonable legal fees, that you, Wattwatchers, or a third party suffers because you:

1. breach these Terms;
2. break any laws that apply;
3. infringe our intellectual property rights or those of a third party included or linked in our Platform; or
4. have a dispute with a third party from using the Platform.

General

These are general terms that say you can't give your responsibility under these terms to someone else, and that we agree under the laws of New South Wales, Australia.

If anything is wrong, please send an email with all the details

to info@wattwatchers.com.au

Governing Law. These Terms are governed by the laws of New South Wales, Australia and subject to the exclusive jurisdiction of the courts of New South Wales.

Assignment. These Terms, and any rights and licenses granted by them, may not be transferred or assigned by you, but may be assigned by Wattwatchers without restriction.

No Waiver. Wattwatchers' failure to assert any right or provision under these Terms does not constitute a waiver of such right or provision.

Entire Agreement/Severability. These Terms, together with any amendments and any additional agreements you enter into with Wattwatchers in connection with the Platform and Services, constitute the entire agreement between you and Wattwatchers. If any provision of these Terms is deemed invalid, the invalidity of such provision will not affect the validity of the remaining provisions.

Contact. All enquiries may be directed to Wattwatchers, PO Box 4, Indooroopilly QLD 4068, Australia, info@wattwatchers.com.au.

Version: 2.6.0

Updated: 28 Oct 2020

Change notes:

Revision of the "Release and Indemnification" section in response to Data Advisory Panel feedback.

Appendix 3: Draft Research Consent Form

MyTown Microgrid – Feasibility Study (Heyfield)

Consent form

I (participant's name)

agree to participate in the research project MyTown Microgrid - Feasibility Study (Heyfield) being led by Wattwatchers Digital Energy, Heyfield Community Resource Centre, Institute for Sustainable Futures (ISF) of the University of Technology Sydney, and funded by the Department of Innovation, Science, Energy and Resources.

I understand that the purpose of the research is to understand the feasibility of a microgrid and other local energy options⁵ for the community of Heyfield. The project will investigate the community's appetite, the local situation, determine the level of impact for the stakeholder groups/ individuals in the community, gather ideas from local stakeholders, deploy energy monitoring devices, and undertake an assessment of the potential for a microgrid in Heyfield.

I understand that my participation will involve [the installation of Wattwatchers energy monitoring devices/online survey/workshop attendance] and will take approximately [1 hour/1 hour/2 hours] of my time. If I am having a monitoring device installed I will also fill in [a questionnaire or an energy audit] about my house, so that the project can assess the impact of options such as improving insulation or heating and cooling equipment on the overall Heyfield load, and so that data can be anonymised into "typical" usage profiles.

Researchers at the University of Technology Sydney and partner researchers at the Federation University will have access to the data from the monitoring devices and the linked data from the questionnaires or energy audits. This will be kept securely in the University of Technology digital file storage and will be shared with researchers as needed for the project. Anonymised data will be made available to other researchers and may be published to show the impact of different energy options on load profiles. Anonymised aggregated data (constructed out of several residential load profiles) will be made available to other communities in the form of typical load profiles in a decision support tool for local energy options.

Participants may opt out at any time, at which point the data monitor will be disabled remotely and the participant may also switch off the device. If participants withdraw within three months, any data already logged will not be retained or included in the project. After three months data already logged will remain in the project database, but no further data will be included.

I am aware that I can contact Dr Scott Dwyer (0451 596 030) if I have any concerns about the research.

I also understand that I am free to withdraw my participation from this research project at any time I wish without giving a reason.

I agree that my questions have been answered fully and clearly.

I understand that the research data gathered from this project will be published in a form that will not identify me in any way.

Please select one of the following options

⁵ A microgrid can be defined as a group of homes and businesses who use, generate, and share electricity. It may be able to function both as part of the grid, and autonomously.

I agree that photos or video of me can be taken during the project and used for the purpose of communicating the research and the work of the ISF (eg. newsletter, annual report).

OR

I DO NOT agree that photos or video of me can be taken during the project.

Please indicate if you would like to be sent project updates by email

Yes I would like to be sent project updates

Please fill in email if you would like updates _____

Name:.....

Position:

Organisation:.....

Signature:.....

Date:

Studies undertaken by the Institute for Sustainable Futures have been approved in principle by the University of Technology Sydney, Human Research Ethics Committee. If you have any complaints or reservations about any aspect of your participation in this research you may contact the ISF Ethics Coordinator, Federico Davila (0403 657 124) or the ISF Responsible Academic, Dr Keren Winterford (0418 910 800).

You may also contact the UTS Ethics Committee through the Research Ethics Officer (02 9514 9772, Research.Ethics@uts.edu.au). Any complaint you make will be treated in confidence and investigated fully and you will be informed of the outcome.

ISF Ethics Coordinator, Federico Davila
TEL + 61 403 657 124
Federico.Davila@uts.edu.au

ISF Responsible Academic, Dr Keren Winterford
TEL + 61 418 910 800
Keren.Winterford@uts.edu.au

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If you need to confirm the identity of the researchers or would prefer to discuss a complaint or reservation with an independent local contact their details are listed below. The local contact person will pass your comments on to the UTS contacts listed above.

Julie Bryer Heyfield Community Resource Centre
0427 512 602