App and dashboard requirements

Revisions

Date	Rev	Author	Changes
2025/01/30	1	Duncan Drennan	Initial draft
2025/02/02	2	Duncan Drennan	Added meter view and geyser view
2025/02/23	3	Duncan Drennan	Add task priority list

1. Introduction

This is a working (and changing) document and covers the requirements for the ponty.io / PawaNe mobile app and web dashboard.

2. Prioritised task list

This task list is structured to achieve two overarching MVP goals:

    A. Onboard a user and allow them to see their electricity meter readings
    B. Onboard a geyser controller and allow the user to control and schedule when the geyser is on.

The assumption is that an end user will use a mobile app to interact with the data and geyser controller.

The minimum steps in order of priority to achieve (A) are:

1. Register a new user
2. Allow a user to reset their password
3. Show the consumption for the current billing period and latest meter reading in the mobile application

For (B) the approach is to make the basic functionality work first, then build the ability to onboard a geyser. The minimum steps in order of priority to achieve (B) are:

1. Show the real-time temperature
2. Set a geyser schedule
3. Ability to turn on the geyser manually

    Following steps relate to onboarding

4. Scan a QR code to obtain controller name and setup password
5. Scan BLE and connect to geyser controller BLE interface
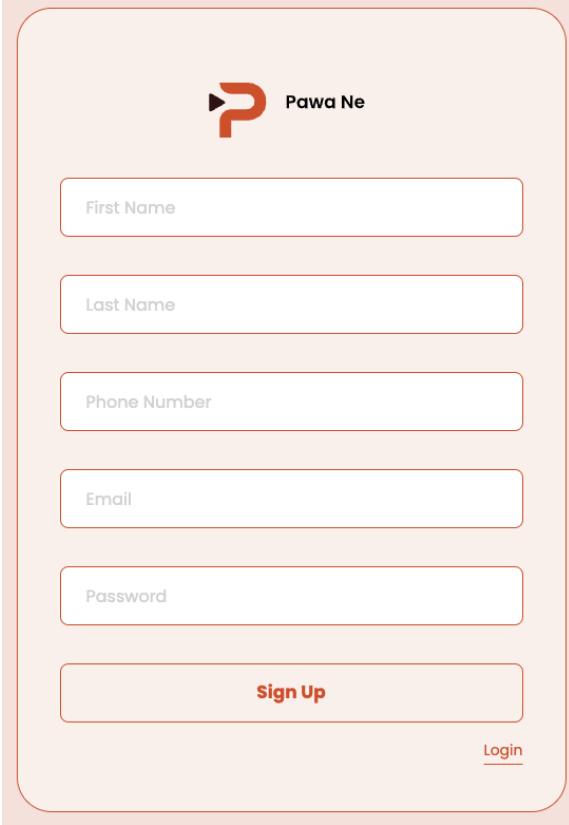6. Use BLE RPC command to configure Wifi access point

3. User onboarding & login

3.1. Requirements

1. User must be able to register a new username and password. A Cognito user must be created with the necessary credentials.
2. User must be able to login
3. User must be able to reset their password

3.2. Web dashboard

The web dashboard is typically used by estate managers to get a view of the entire estate or measurement area.

Login page	
  Pawa Ne Email Login Sign up 	● Add "Reset password"
User registration page	

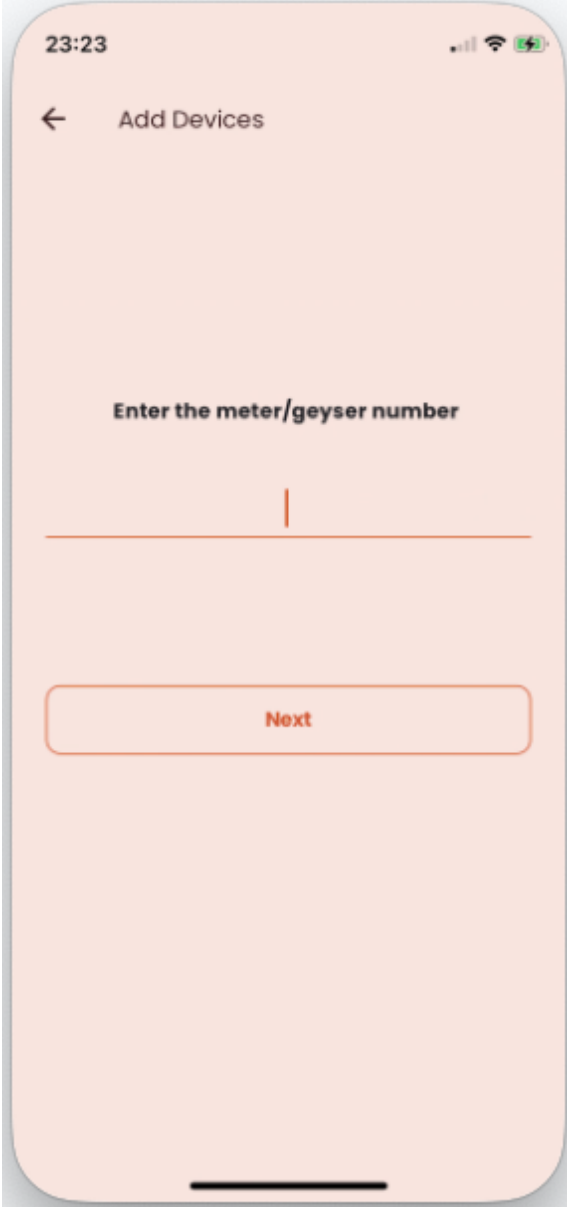|	
  Pawa Ne First Name Last Name Phone Number Email Password **Sign Up** Login	• Only email and password are required fields • Sign up should take them through an email verification process • Not sure about Cognito path, but currently it might be setup to send an automatically generated password to the user, then they have to set the password on the first login. I'm sure this can be configured to work differently
Password reset page	
Simple page with email field and "Reset password" button	• Enter email address • Verification code / password reset link sent to email

3.3. Mobile app

The mobile app is the preferred way for end users to register and view their data. The pattern is the same as the web dashboard
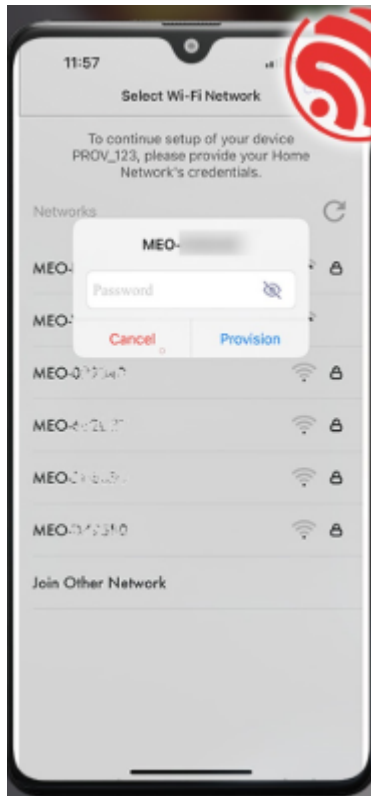
4. Add an electricity meter or geyser controller

4.1. Requirements

1. User must be able to add an electricity meter (or residence)

4.2. Mobile app

Add devices	
23:23 ← Add Devices **Enter the meter/geyser number** Next	**Meters** ● Ideal here is to be able to scan a QR code to get the details, e.g. QR code on DB which has the details for the unit ● For estates: user gets a message that their request to access the meter has been sent to the estate manager ● For municipal customers: exact action to be determined. Nothing to do for now ● For development: enter either (1) Unit ID, e.g. wedderwill#wedderwill#24, or (2) MSN ● What happens for 3-phase units with multiple MSNs? Unit ID is helpful in that case, or estate/unit selection process ● Meter data and access is controlled by the estate ● Go to meter data view page **Geyser controllers** ● Scan QR code on geyser controller ● For geyser controllers, this is the user's device, so they will get immediate access ● App tries to connect to the device over BLE. ● If connection successful go to geyser controller Wifi scan page

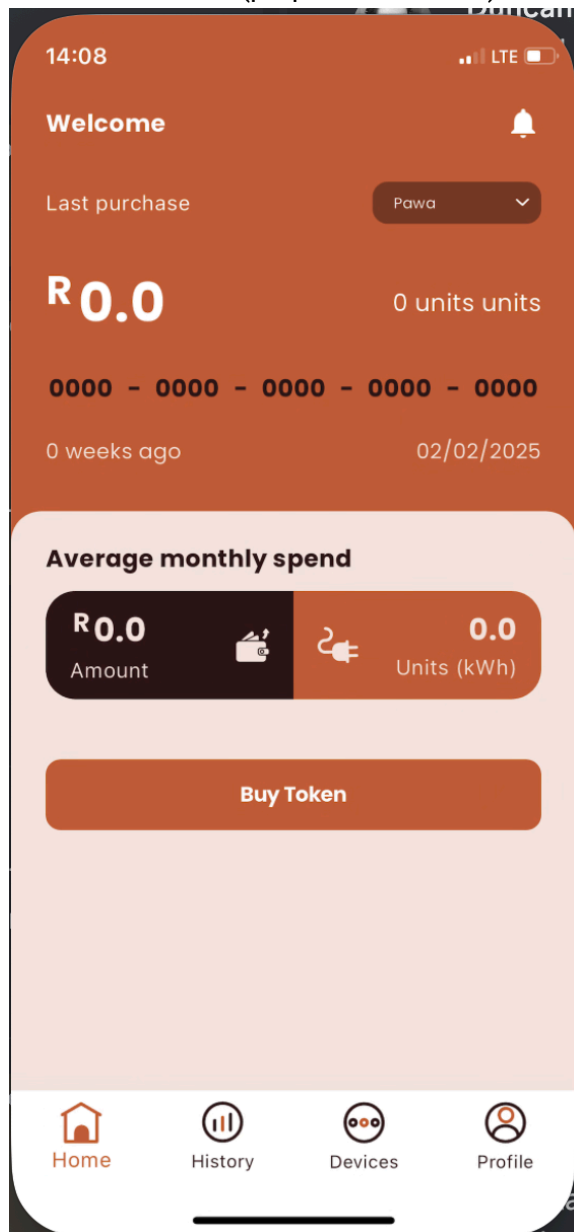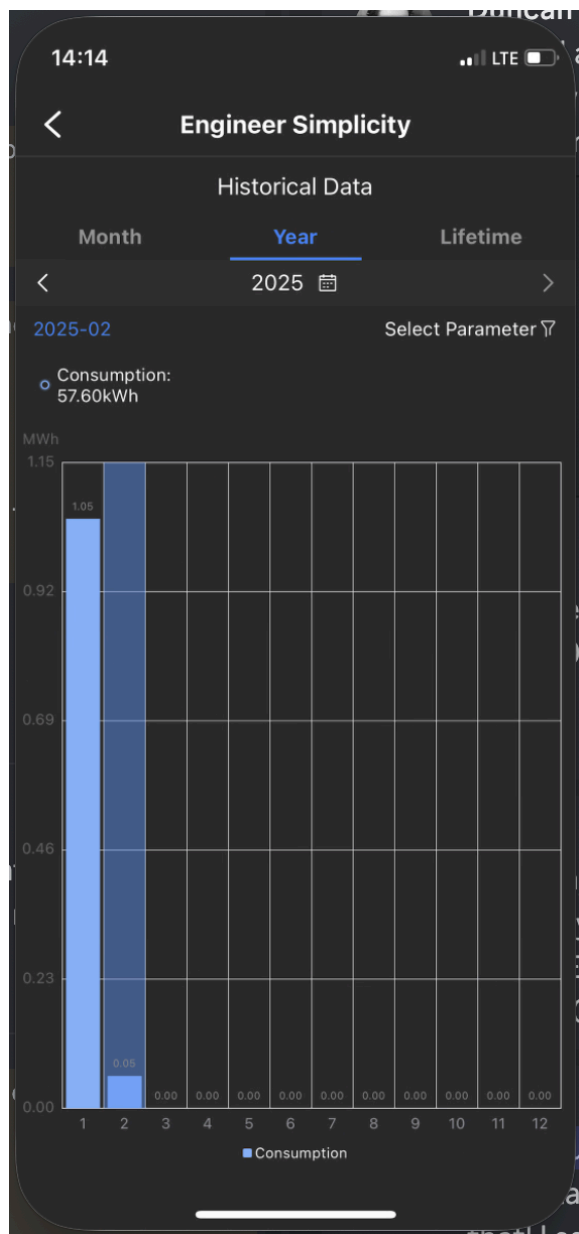| WiFi access point scanning & selection	
	- BLE interface used to scan for available Wifi access points - Image on left just shows the idea, i.e. a list of available access points - Select access point - Enter password and confirm - Wait for geyser controller to successfully connect to ponty.io - Show necessary error messages/page depending on status from geyser controller - Once connected go to geyser data view

5. Meter view

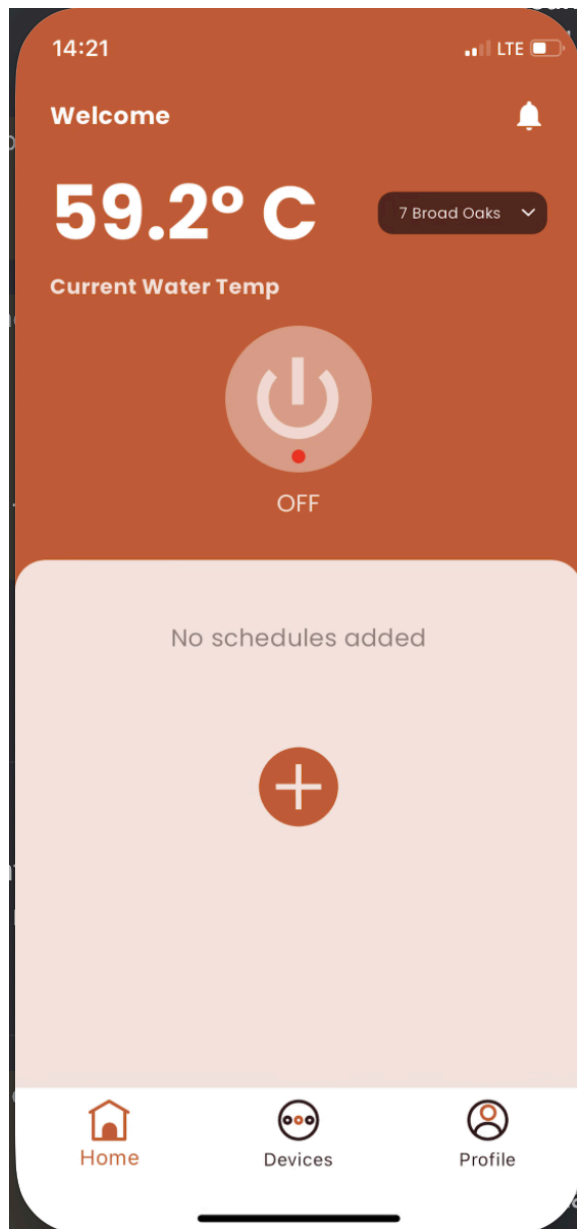| Meter data view	
Current data view (prepaid orientated)	- Needs to change for postpaid - For now, show everything as kWh - Should show: - Consumption for month so far - Consumption last month - Average consumption (over how many months)? - Or maybe bar graph of the last 6 months consumption - Most recent reading and time of reading "R0.0" changes to consumption for this month "0 units units" - "consumed this month" "0 weeks ago" - latest meter reading (export) - Date - change to time of most recent meter reading "Average monthly spend" - change to bar graph of monthly consumption over the last 6 months

| Consumption view idea	8 of 11
	• Bar of consumption for each month • Can click on each month to show what the consumption has been

6. Geyser view

Geyser temperature & control view	
	The geyser UI is up for discussion and debate. Suggest a session to work out what the best options are. ● Temperature should be updated in real-time as data is sent from the geyser ● Possibly good to show if the geyser is currently on and heating ● Must show that the geyser is currently in an "active" / "on" state (busy regulating the temperature to the set point) ● Must show the set temperature ● Scheduler UI as it stands is good. ● A way to set the geyser temperature needs to be added (e.g. click on the set point to change it). For now, all schedules can have the same set point. ● User must be able to "heat now". ● Need to display if DSM is active, possibly even a significant background colour change. It must be very clear that DSM is currently active. ● User can override DSM by starting a heating cycle
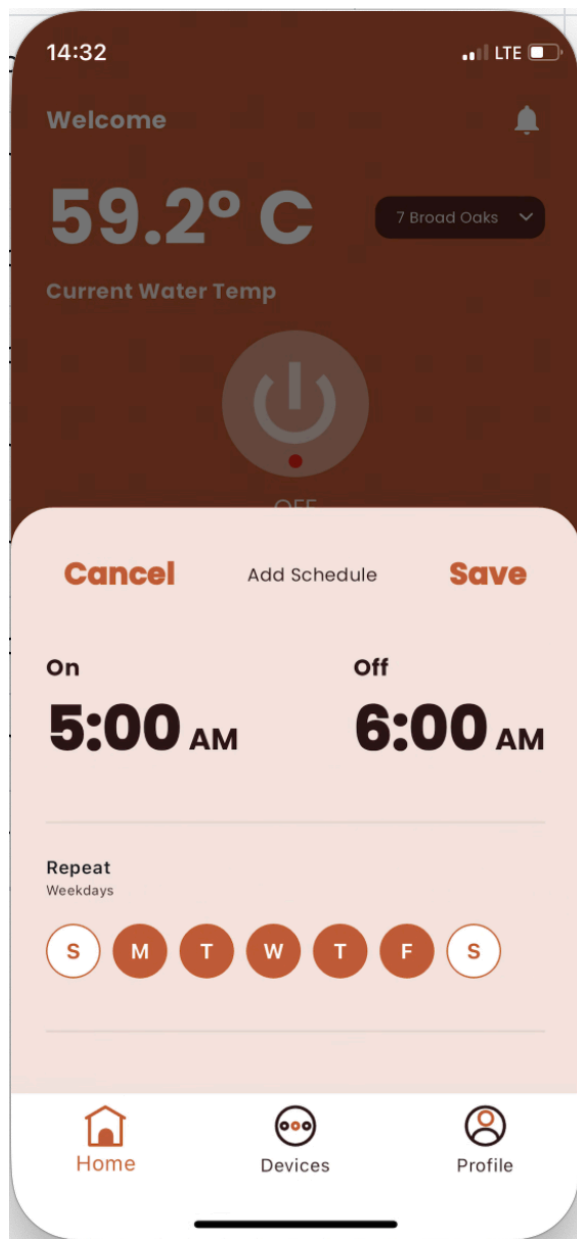
Scheduler	
	• No changes required

7. Dashboard data view

[this section needs to be completed]

8. Dashboard billing view

[this section needs to be completed]