

Measuring and paying for water use at 30 Heather Street

In 2011, meters were installed so that cold and hot water use could be measured separately for each apartment. Since then, EnergyCo have been manually reading meters and issuing invoices every month. They recently terminated their contract and final invoices were issued last month. We have not been able to find a firm or individual to take on the same role as EnergyCo.

Remote monitoring of smart meters is now common practice, the benefits of which are:

- obtaining accurate billing information
- encouraging conservation and savings in water usage
- saving time and the cost of manual readings
- detecting leaks early

Multi-occupancy buildings with no meters simply apportion total water consumption across all apartments (either as an average or on the basis of the unit title levy allocation). Water charges then become part of the annual levy. The Body Corp Committee wishes to retain the ability to charge apartment occupants, not necessarily owners, for the water that they consume.

EnergyCo suggested smart meters could cost \$50k or more. We invited three firms to quote:

- Sensys - gave a provisional estimate of \$45k.
- Smart Metering - provided a firm quote of \$29.5k.
- Hynds - are yet to respond.

Smart Metering will install cold and hot water meters for each unit, collect data, prepare and issue invoices every month and provide ongoing maintenance. Their proposal is attached. See also www.smartmetering.co.nz. Subject to further reference checks and due diligence, the Body Corp Committee recommends that we appoint Smart Metering.

This investment will be undertaken by the Body Corp, with funds drawn from our Long Term Maintenance Fund (LTMF). This will cover the cost of replacing the meters and initial system set-up, as proposed by Smart Metering, as well as any costs of making good that may be needed in the common areas or in individual apartments.

As required by law, all Body Corps are currently in the process of extending their Plans for LTM over a 30-year period. We appointed Plan Heaven earlier this year to update our LTMP. Their work is nearly complete. The resulting LTMP will require the approval of all owners. The cost of smart meters will be included in year one of the new Plan.

The aim is to prepare a balanced Plan, which allows for proactive, cost-effective maintenance whilst spreading investment over time. This approach seeks to provide apartment owners with predictable annual levies to the LTMF.

We request your support for the proposal, either the appointment of Smart Metering or if need be, another supplier with an equivalent offer.

Richard Cuthbert	Craig Bong
Chairman	Building Manager
30 Heather Street Body Corporate	

12th May 2024

30 Heather Street, Parnell
Apartments

Smart Water Meter Billing
Proposal

Table of Contents

1	About Smart Metering.....	1
2	Current Water Meter reads issues	2
3	Smart Meters Automated Power and Water Meter Reads Benefits	4
4	E2E Smart Metering Solution	5
5	30 Heather Street Apartments Existing Water System	6
6	Smart Meterings' Connected Ultrasonic Water Meter	8
6.1	Specifications	9
7	Water Invoicing Features	10
8	Typical Monthly Billing Examples	11
8.1	Smart Metering Monthly Invoice	11
9	Smart Metering Infrastructure Investment	14
9.1	CAPEX.....	14
9.2	OPEX.....	15

1 About Smart Metering



Smart Metering provides automated Water, Power and Gas Metering Readings. Smart Meterings' technology eliminates the need for manual meter readings, saving time, money, and resources.



By automating the meter reading process, Smart Metering provides more accurate and timely data, resulting in better billing accuracy and efficient resource management



We design and build our own hardware that attaches to existing water and electric meters to provide automated meter readings. We also interface with existing smart water and electric meters into Smart Metering's powerful, cloud-based online platform



Smart Meterings' unique approach and technology provide more frequent (min twice daily reads), accurate meter reads with transparent charges which means we can offer a lower cost service model whilst better serving apartment owners/occupiers

2 Current Water Meter reads issues

Current Water Metering System

- Currently all meters installed are mechanical sub (or Check) meters, This requires an authorised person to manually walk around the apartment building manually meter reads from the installed Water Meters.
- The costs associated with the supply of hot and cold water supply is currently incorporated into the body corporate fees the owners need to pay.
- There is currently no incentive for apartment occupiers to be mindful of their hot and cold water usage.
- The cost for water and energy to heat the water keep on rising, Watercare have recently announced a 25% increase in water supply, which for the apartment owners will need to be recouped through higher body corporate charges.
- By moving to an occupier pay model for hot and water costs, this would put the responsibility from the owner onto the occupier for their hot and cold water usage.

Common problems we see with manual meter reads

- Current process of manually reading water is outdated and inefficient.
- Since most of the meters are inside the actual apartment, this requires planning and notification to all apartment owners, when a manual read is to be taken. This results in property management overhead, planning and costs, which is also very inconvenient to the apartment occupiers.
- Since to take manual reads are difficult to take at 30 Heather Street and requires a physical authorized person to actually visit, actual meter reads are only taken every 3 months or so. This results in inaccuracies and delays in billing
- These older meters (more than 10 years old) are no longer accurate.
- Higher costs for Property Managers, Body Corporates and owners and tenants.
- Wasted resources due to human error and delays in reporting
- We actually seen problems on our site survey where a meter was assigned to the wrong apartment.
- Inaccurate readings can result in overbilling or underbilling.

Smart Metering Benefits

Smart Metering gets around these inherent problems by installing gateways (2 required for 36 Heather Street) which automatically receive meter reads every day from Smart Metering's installed meters. By receiving meter reads every day from the properties we produce highly detail meter reads with open and transparent monthly invoices to the apartment owners or tenants.

- Our technology eliminates the need for manual meter readings, saving time, money, and resources
- Smart Metering provides a unique solution to these issues by implementing Smart Metering's new connected Ultrasonic meters to automate the process of meter reading and billing.

- Smart Metering solution provide daily accurate meter reads, pushed automatically into Smart Meterings' SAAS data and billing platforms.
- We email detailed monthly invoices to all apartment owners and tenants.

3 Smart Meters Automated Power and Water Meter Reads Benefits

Our automated meter reading solutions offer several benefits to the Australian and New Zealand apartment and multi-tenant building market



Accurate Billing - Eliminate the errors and discrepancies associated with manual meter reading, ensuring precise billing for both tenants and property owners..



Real-Time Data - Provide instant access to daily consumption data for individual units, enabling property managers to monitor usage, identify anomalies, and implement energy-saving measures



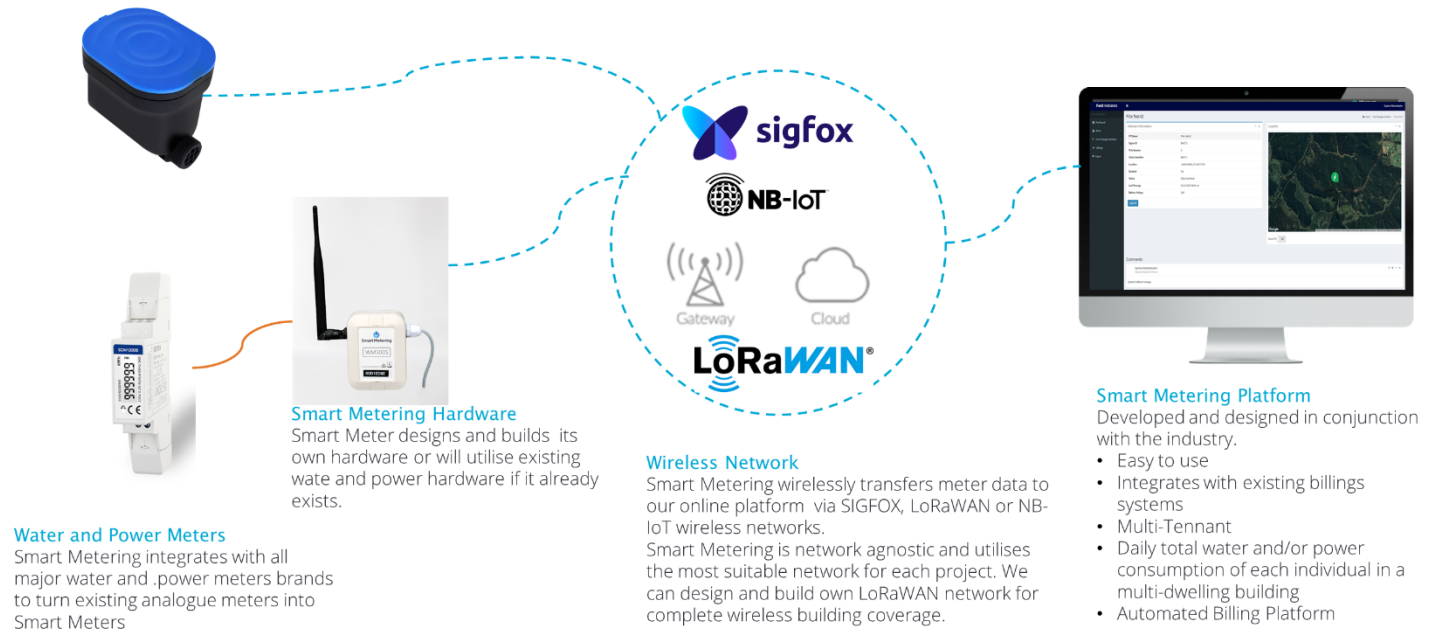
Sustainability : - Facilitate sustainable practices by promoting energy conservation and environmental responsibility among residents and property managers



Fixed Costs – Human labour taking manual reads is getting more expensive and harder to resource. Smart Metering provides a fixed cost for daily meter reads over the contract term

4 E2E Smart Metering Solution

Smart Metering delivers a complete unique E2E water metering solution from new connected ultrasonic water meters to remote connectivity and data and billing platform.



5 30 Heather Street Apartments Existing Water System

There are 21 separate apartments at 30 Heather Street. 20 of the apartments have a separate hot and cold water inlet both of which are monitored by old type of mechanical water meters.

The penthouse suite has 2 hot and 2 cold inlets and also a separate cold water line for a garden hose outlet.

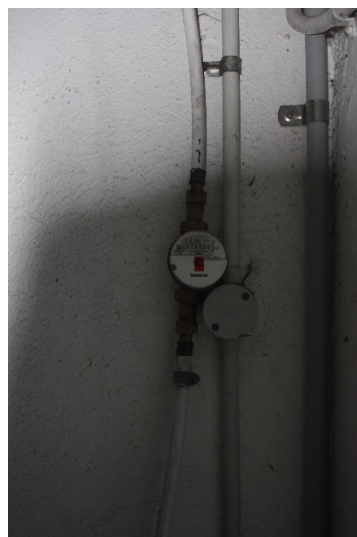
There is also 1 communal water outlet in the basement.

There is a central gas water heater in the basement, which supplies the hot water to all the apartments.

At least 2 of the apartments when we performed a site survey, the meters were accessible in the service duct areas. For the majority of the apartments the meters are installed inside the apartment itself – which makes it difficult for manual reading and maintenance.



Service access in hallway, for water meter access.
Only 2 apartments have a common area where meter access is possible.



Common water meter in basement area.



Typical existing cold water meter



Typical existing hot water meter.

6 Smart Meterings' Connected Ultrasonic Water Meter



Smart Metering's connected Ultrasonic Smart residential water meter made by nature friendly composite material. Compared to tradition mechanical meters, Smart Metering's Ultra Sonic meter has no moving parts and is much more accurate, with a starting flowrate as low as 2 l/h and dynamic range up to R800, that give the ability to measure very low flowrate. Every drop of water can be measured.

Smart Metering's connected Ultrasonic meter is made of nature-friendly composite material and suitable for residential, households, apartment buildings, and small commercial premises. Through the special flow pipeline design, so is different from the traditional mechanical water meter in that it does not need any straight pipe sections.

This robust design makes Smart Metering's Ultrasonic meter highly precise and maintenance-free throughout its flexible 15 years battery life.

6.1 Specifications

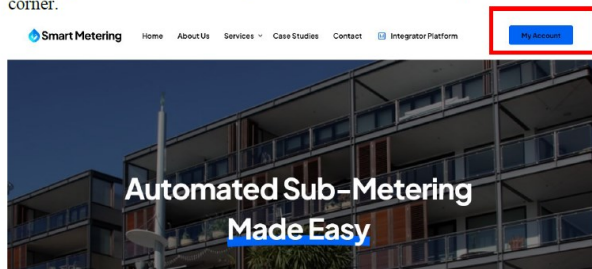
Model	Smart Metering Ultrasonic 1		
Pipe Diameter	DN15		DN20
Minimum Flow Rate q_i (m³/h) @R800	0.003125		0.005
Permanent Flow Rate q_p (m³/h)	2.5		4.0
Maximum Flow Rate q_s (m³/h)	3.125		5.0
Connection	G3/4'		G1'
Length (mm)	110		130
Width (mm)	78		78
Height (mm)	91		95
Temperature	<ul style="list-style-type: none">• Medium Range: 0.1°C.....30/50/70°C (T30/T50/T70)• Ambient temperature: 5~55 °C• Storage temperature: -20~60 °C		
Metrological Class	Class 2, R160/ R200/ R250/ R400/ R500/ R800		
Maximum Operation Pressure	1.6 Mpa		
Pressure Loss	$\Delta P < 63\text{kPa}$		
Pressure Stage	PN16		
Protection Class	IP68		
Battery	15 years		
Flow Field Sensitivity	U0/ D0		
Data Storage	24/ 120 logs, daily/ weekly/ monthly.		
Environmental Requirement	E1, M1, B		
Interface & Communication	<ul style="list-style-type: none">• LoRaWAN• M-Bus	<ul style="list-style-type: none">• NB-IoT• RS485	<ul style="list-style-type: none">• Sigfox
Installation	360 degree		
Display and Indication	<ul style="list-style-type: none">• Unit: L/ m³/ Gal (optional)• LCD: 10-digit		
Standard Compliance	<ul style="list-style-type: none">• EN14154• ISO4064• OIML R49		

7 Water Invoicing Features



Register Your Account Process

Go to <https://www.smartmetering.co.nz/> website – Click on My Account in Top Right corner.



Welcome Pack

Smart Metering will post though a Welcome Pack to each of the 30 Heather Street apartment occupiers. The Welcome pack will outline how they can register on our online portal from the Smart Metering website and provides information on how the residents can view their water usage with invoice and payment details



Sign in

Shaun

SIGN IN TO MY ACCOUNT

Forgot password

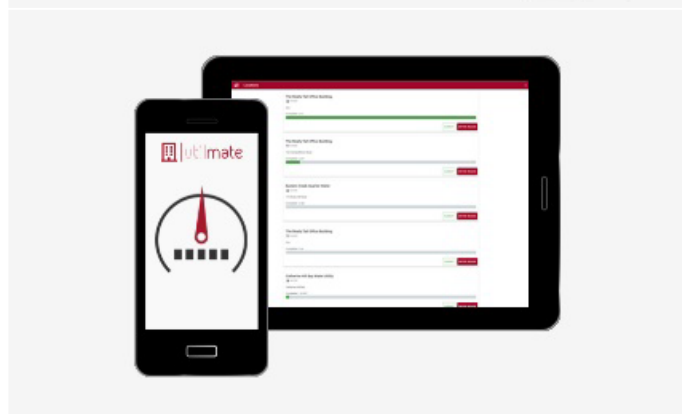


Customer Portal

All residents can view and manage their own accounts. Usage, ebilling invoices, move-in, move-out, set up direct debits and make payments are available to all residents 24/7.

Anytime, Anywhere

Smart Metering Billing platform is cloud based and available where and when to 30 Heather Street residents.



Detailed Data

Smart Metering provides automated daily water and/or power meter usage, which residents can login to the platform and see detailed graphs of their daily usage data.

8 Typical Monthly Billing Examples

Smart Metering have completed some detailed modelling for the water usage and costs for the Heather Street Apartments.

Smart Metering have estimated average monthly water usage is around 6.82KL per month per commercial property. Which equates to 220 Litres per day (Average water usage per person per day in Auckland is between 140L to 170L).

We have supplied what would be the typical monthly Smart Metering invoice based on this amount would look like .

8.1 Smart Metering Monthly Invoice

At 9KL Per Month

Smart Metering Invoice = \$77.00 Per Month

#This invoice amount includes a 10% Watercare price increases due on 1st July this year and GST.

Invoice Breakdown

Monthly Invoice			
Watercare Supply Charge /PM	\$	4.65	\$ 0.15 Includes GST Component
Cold Water Supply /PM (includes Watercare % increase)	\$	5.23	\$ 2.19 Includes GST Component
WasteWater Supply /PM (includes Watercare % increase)	\$	24.68	\$ 3.81 Includes GST Component
Hot Water Supply /PM	\$	30.94	\$ 6.98 Includes GST Component
Total Usage Charges	\$	65.50	
GST Component	\$	8.54	
Smart Metering Service Charge	\$	11.50	Includes GST Component
Total Smart Metering Charge	\$	77.00	
GST Component of Total Invoice	\$	10.04	

This total amount Per month includes:-

- Small fixed Watercare charge per month
- Cold Water supply
- Wastewater charge
- Hot Water Supply
- Smart Metering monthly service charge
- GST component

Smart Metering 30 Heather Street Invoice Example

This is based on average daily use of 150L per apartment per day

Page 1



TAX INVOICE

John Hughes
30 Heather Street Parnell
AUCKLAND CBD
NZL 1021

Account details

Account number: 100036
Invoice number: 202404/1000049
Issue date: 1 April 2024
Supply address: Number 1
Apartment / Townhouse, Proposal Address
Site Identifier: Minnie_009

Need help?

Email: info@smartmetering.co.nz
Phone: (09) 951 9585 Mon – Fri (Ex Public
holidays) 9am – 5pm
Web: <https://smartmetering.co.nz>

Important numbers

Faults and emergencies: (09) 442 2222
(Watercare)

Bill summary

Previous balance	\$0.00
Opening balance	\$0.00
New charges	
Water charges (please see over for details)	\$65.50
Monthly Service Fee	\$11.50
Total new charges including GST	\$77.00
GST included in new charges:	\$10.04
Account balance	\$77.00

Balance due by 20 April 2024

\$77.00

Any balance unpaid after the due date will incur a \$10 administration fee.

Your payment methods

Account number: 100036 Total due: \$77.00 by: 20 April 2024



Direct Debit

Save time by having your account paid automatically. Apply online at MyAccount or call us on (09) 951 9585 to set up a direct debit.



Credit Card

Go to MyAccount/paymybill to make a payment via your Visa or Mastercard. 3% surcharge will apply. Your account number is 100036.



Internet Banking

Our bank details are as the following

Branch:
Account number: 12-3209-0006669-00
Reference: 100036

Page 2

UNDERSTAND YOUR BILL

WATER:

Your charges are based on an actual meter reading

Summary of your plan:

Service address: 30 Heather Street Parnell NZL 1021
 Site Identifier: Silo_024
 Supply period: 01/02/2024 - 31/02/2024 (31 days)

Meter Reads

Meter Number	Multiplier	Previous Reading	Current Reading	Total Usage
BCF95720000EF82C/1	0.0	0.00 L (Actual)	2,387.00 L (Actual)	2,387.00

Usage Charges

Description	Charge Period	Quantity	Unit	Rate	Total
WaterCare Supply Charge	01/02/2024-31/02/2024	31	days x	\$0.15 =	\$4.65
Hot Water Usage	01/02/2024-31/02/2024	4.43	kL x	\$6.98 =	\$30.94
Cold Water Usage	01/02/2024-31/03/2024	2.39	kL x	\$2.19 =	\$5.23
Waste Water Charge	01/02/2024-31/03/2024	6.48	kL x	\$3.81 =	\$24.68

Total amount due (including GST) \$8.54 \$65.50

Usage Summary



Average daily usage	220 L
This period last year	0.00 L
This period	2,387.00 L
Average daily cost (incl GST)	\$2.11



Independent complaint advice
 Should we not be able to resolve your complaint, you can contact
 Utilities Disputes for a free, independent dispute resolution.
www.utilitiesdisputes.co.nz

Smart Metering emails (no post option available) monthly invoices to all residents monthly.

Persons responsible for the invoice have multiple options to pay, including internet banking, credit and debit cards.

9 Smart Metering Infrastructure Investment

9.1 CAPEX

ITEM	QTY	Price Per Unit/ NZD	Pricing / NZD
Smart Meterings Ultrasonic S1 Connected Cold Water Meter	23	\$209	\$4,800
Smart Meterings Ultrasonic Connected Hot Water Meter	22	\$289	\$6,360
Water Meter Installation. Includes all parts including Brass Water Tail & Nuts, PEX Transition Fittings.	45	\$120	\$5,400
LoRaWAN Basestation (Including Installation) To Collect Meter Data from water meters and deliver meter data to Billing Platform	2	\$2,310	\$4,620
One-off Initial Data and Billing Platform setup Fee for full building rollout	1	\$4,500	\$4,500
Total Cost			\$25,680

Notes

1. Smart Metering will take over and pay directly the monthly Watercare Invoice and Energy Costs for heating the hot water and recoup the costs by invoicing monthly the apartment occupiers directly.
2. Free Carparking at the Parnell apartments would be required for our plumber when installing the meters,
3. The installation costs does not include any repairs to wall linings / cabinetry if extra access to replace the existing water meters is required.
4. Smart Metering will replace any meter at our cost which has gone faulty and not sending accurate meter reads over the term of the contract
5. Property Managers to supply details of the Tenants (name, address, email, telephone number) to Smart Metering on the signing of the agreement.
6. Minimum 5 year contract
7. All pricing excludes GST
8. Lead Time 4 -6 weeks
9. 50% Payment on PO

9.2 OPEX

1. Smart Metering pass on the actual Watercare cost for the Water supply and Wastewater. We do not add a markup to these 2 Watercare component costs. Smart Metering cover our costs via a monthly service charge.
2. Smart Meterings Data Integration and billing SAAS Platforms Service billing charge is \$10 Per Month +GST included onto the Smart Metering invoice.
3. Increases from Watercare for water and wastewater and energy costs for the heating the hot water, will need to be passed on the Smart Metering Invoice to apartment occupiers. Smart Metering provide email notifications on any price increases to all customers.
4. Smart Meterings' service charge fee is fixed for the course of the contract – min 5 years.
5. For water usage for the common outlet, Smart Metering will send this invoice directly to the body corporate.