

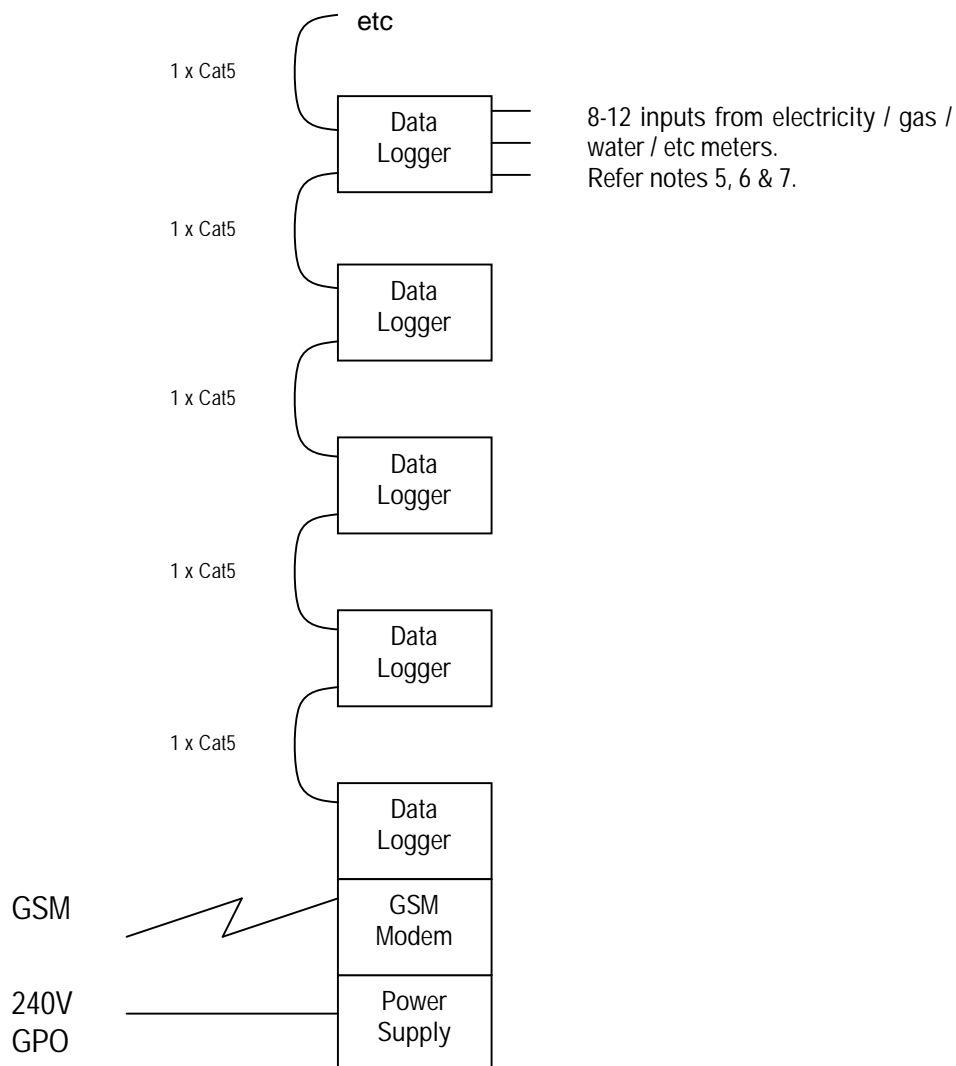
Attachment C

Metering Requirements

	Requirement	Technical Assistance	Supplier / Contact
Source Metering	Supply and installation of electricity meters (meters MUST be Energex supplied, specific for KGUV)	For franchise electricity customers, electricity meters will be supplied free of charge.	ENERGEX Ltd (Metering Dynamics) 46 Blinzinger Rd BANYO QLD 4014 Contact: Andrew Blades Ph: (07) 3407 5466 mb: 0410 621 647 e: andrewblades@energex.com.au
	Remote meter reading system for electricity / gas / water / etc meters, and set up of data reading services.		ENERGEX Ltd (Metering Dynamics)
	Supply and installation of gas, water, etc meters with pulsing outputs		ENERGEX Ltd (Metering Dynamics) can advise on gas/water meters if required EcoVision Solutions Pty Ltd can supply Water, Hot Water and Chilled Water Meters if required
	Cat 5 cables between meters and data loggers, and between data loggers		Refer attached diagram for conceptual view of cabling configuration for remote data reading system.
	Connection of Cat 5 cable at meters (not data loggers)		
	GPO outlet on essential services circuit for supply to data logging system	GPO to be installed in each tenancy meter box	Developer
	Meter Test Blocks (Research will require occasional connection of portable survey meters for monitoring electricity usage within each tenancy)	All premises shall have an ESAA Metering Test Block installed adjacent the tenant's switchboard and wired into electrical circuits, to facilitate easy and safe connection /disconnection of survey meters	ENERGEX Ltd (Metering Dynamics) can supply Meter Test Blocks for a fee.
	Labour to assist testing all meters for correct remote reading.		Developer to supply
Source Monitoring and feedback	Supply of EcoVision 3001 for 90% of Residential Tenancies <ul style="list-style-type: none"> • RTD's for Hot & Chilled Water • Input Cards • 5" LCD Interface Screen • Cat 5 connector 	A complete source monitoring and feedback kit with installation instructions and user guide	EcoVision Solutions Pty Ltd Contact: Steve Miller Ph: 61 7 5569 0166 Mb: 0419 658414 Fx: 61 7 5569 0177 e: steve@ecovisionsolutions.com.au

Full Service Metering	Supply of EcoVision 5001 for 10% of Residential Tenancies <ul style="list-style-type: none"> • RTD's for Hot & Chilled Water & 3 Rooms • 12 x Occupancy Sensors • 8 x AI, 88 x DI and 48 x D0 • 12.1" Touchscreen Interface • Cat 5 connector 	A complete source monitoring, service monitoring, resource management and feedback kit with installation instructions and user guide	EcoVision Solutions Pty Ltd Contact: Steve Miller ph. 61 7 5569 0166 mb. 0419 658414 fx. 61 7 5569 0177 em. steve@ecovisionsolutions.com.au
	Requirement	Technical Assistance	Supplier / Contact
Full Service Metering (continued)	Supply of EcoVision 5002 for all Commercial Tenancies <ul style="list-style-type: none"> • RTD's for Hot & Chilled Water & relevant rooms • Occupancy Sensors • I/O Cards as required • Local Controller and Data Logger • 12.1" Touchscreen Interface • Cat 5 connector 	A complete source monitoring, service monitoring, resource management and feedback kit with installation instructions and user guide	EcoVision Solutions Pty Ltd Contact: Steve Miller ph. 61 7 5569 0166 mb. 0419 658414 fx. 61 7 5569 0177 em. steve@ecovisionsolutions.com.au
	Supply of EcoVision 5003 for all Buildings & Common Services <ul style="list-style-type: none"> • RTD's for Hot & Chilled Water & relevant rooms • Occupancy Sensors • I/O Cards as required • Local Controller and Data Logger for Building • Controller for EcoVision 3001 collation • Cat 5 connector 	A complete source monitoring, service monitoring, resource management and feedback kit with installation instructions and user guide	EcoVision Solutions Pty Ltd Contact: Steve Miller ph. 61 7 5569 0166 mb. 0419 658414 fx. 61 7 5569 0177 em. steve@ecovisionsolutions.com.au
Cabling: Electrical & Data	Electrical Works and Installation of EcoVision 3001, 5001, 5002 and 5003.	A structured wiring methodology will be used for all light and power.	Developer Ecovision will supply installation instructions and a training course for the Electrical Contractors or referrals to Electrical Contractors trained in EcoVision.
	Electrical Works, Installation and termination of data cabling for all EcoVision 3001, 5001, 5002 and 5003 installations <ul style="list-style-type: none"> • Cat 5 Ethernet Cable from each EcoVision 3001 to the EcoVision 5003 Switch • Cat 5 Ethernet Cable between EcoVision Smartnet Interface and EcoVision 5003 Switch • Cat 5 Ethernet Cable from each EcoVision 5001 and 5002 to the EcoVision Building Switch. • Cat 5 Ethernet Cable between the EcoVision 5003 Switch and the EcoVision Building Switch 	EcoVision Solutions Pty Ltd will provide a training course for the Contractors or referrals to Contractors trained in EcoVision.	Developer / ICT Contractor

	<p>Electrical Works, Installation and termination of data cabling for all EcoVision Building Switches</p> <ul style="list-style-type: none">• Cat 5 Ethernet Cable from each EcoVision Building Switch to the EcoVision Site Switch• Cat 5 Ethernet Cable between the EcoVision Site Switch and each EcoVision Server	<p>EcoVision Solutions Pty Ltd will provide a training course for the Contractors or referrals to Contractors trained in EcoVision.</p>	<p>ICT Contractor for KGUV Site or Developer</p>
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SMARTWAY REMOTE METER READING SYSTEM**CABLING CONFIGURATION CONCEPT DIAGRAM (Daisy-Chained Data Loggers)****Notes:**

1. Data loggers located in common access areas – allow space 200x200x100mm.
2. Preferred location of GSM modem and 240V GPO at the end of the Cat5 daisy chain, at the highest point on the building to maximise reception of GSM signals.
3. Total length of daisy chain (end to end) < 1200 metres.
4. Each data logger can accept up to 12 pulsing inputs (minimum 8 desired).
5. For single meters, one Cat5 cable is required between each meter and data logger.
6. For clustered meters (water, electricity, gas, etc), up to four meters may share one Cat5 cable to the data logger.
7. Note: By placing data loggers closer to groups of meters, meter to logger cabling costs may be minimised. Restriction: minimum of eight inputs per logger.