

ENERGY EFFICIENCY INTERVENTION PROPOSAL
Gauteng Partnership Fund
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- A service provider dedicated to quality energy efficiency systems and delivering superior value for our customers. The Company operates in the domestic , commercial and public energy efficiency space servicing both high end markets and low cost houses customers.
- 100% Black Owned
- Established solid relation with strategic partners
- Provide wide range of energy efficiency solutions
- The solution offered comes with its own funding models, backed by the **IDC, DBSA, DOE, ABSA, STANDARD BANK, NEDBANK, FIRST NATIONAL BANK, INTERNATIONAL FUNDERS.**
- Our funding solutions is based on the customer requirement and can be structured from an outright purchase model to a Build Operate and Transfer model, that when aligned with **the Utilities Operating budget will not require new money.**

STRATEGIC PARTNERS



“To create an Economical Viable and Sustainable Municipal Enterprise through the installation of Integrated Utility Management Solutions that will substantially improve Service Delivery in order to change peoples lives.”



ABOUT US - OUR VISION

“Our vision is to grant all South Africans access to efficient cost effective and energy saving solutions.”



PRODUCT OFFERING



**Streetlight
Luminaire Retrofitted
With Calluna
Streetlight Management
Device**



**PRE PAID OR POST PAID
WATER AND ELECTRICITY
METER RETROFITTED WITH
Calluna Management Device**



CRITICAL REQUIREMENTS OF SANS 10400XA

- Competent Person (where necessary) – must submit documentation to local authority as per SANS 10400- XA
- On Plans
 - Where provided – location, type & capacity of water heating installations
 - Where provided – details of fenestration and insulation

SANS 10400 XA – HOT WATER

- Regulation: A minimum volume fraction of 50% of the annual average heating requirement for hot water shall be provided by means other than electric resistance heating or fossil fuels including, but not limited to:
 - Solar heating
 - Heat pumps
 - Geothermal heat
 - Renewable combustible fuel
 - Heat recovery from alternative systems and processes

SOLAR WATER HEATING GEYSERS

SABS Tested

- Very Good System (Not the cheapest) – Q Factor 17.86 (We wanted to be able to reheat the system twice a day – 16 Tubes)
- Quality of Tubes the very best
- Home owners empowered
- Copper pipe installation inside and outside
- SABS tested other fittings to ensure that the minimum maintenance would have to be done
- Co-Operatives used for installation, with a bonus for extra installations per day after quota
- A maintenance team in each community put in place.



What is it ?

- Thermal and acoustic ceiling insulation solution that reduces the amount of energy required to maintain a comfortable living environment
- Innovative way to tackle South Africa's mounting energy crisis
- The insulation limits the amount of space heating and/or cooling the house holds
- The amount of energy And for this reason limits the amount of energy house holds require for space heating

Why Do You Need It ?

- Adding insulation to your home reduces energy demands, saves money (reduced utility bill) and improves comfort.
- The reduction in utility bill will payoff initial investment (Insulation together with other energy saving techniques makes it possible to save up to 78% of buildings energy and hot water services)
- Legislated and fall part of the new specification for all new developments as per SANS10400 –XA Regulation which deals with Energy usage in buildings/homes



How Does It Work ?

- The ceiling is one of the largest areas in your home for heat gain.
- Heat energy from the sun moves from a higher temperature to a lower temperature.
- Cooling units have to work harder to lower the temperature.
- This means there is an increase in electricity consumption and your electricity bill.
- Aerolite slows down the rate of heat exchange from the higher outside air temperature into your cooler house temperature.
- Indoor climate remains comfortable.
- Cooling units work optimally.



- The ceiling is one of the largest areas in the home for heat loss.
- Heat energy from the heating system moves from a higher temperature to a lower one.
- Heating system works harder in an attempt to keep the indoor climate comfortable.
- This means there is an increase in electricity consumption or use of heating fuels.
- Aerolite slows down the rate of heat exchange from the warm indoor environment to the colder external environment.
- Indoor climate remains comfortable.
- Heating systems work optimally

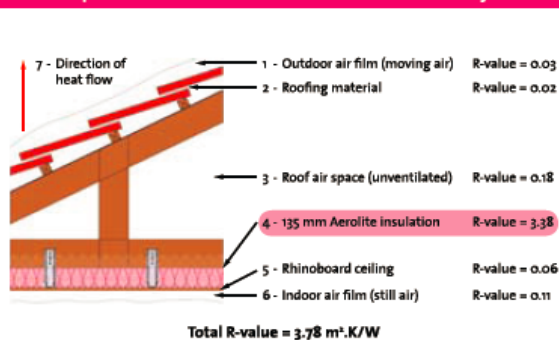
PRODUCT SPECIFICATION

Product Specification and Performance

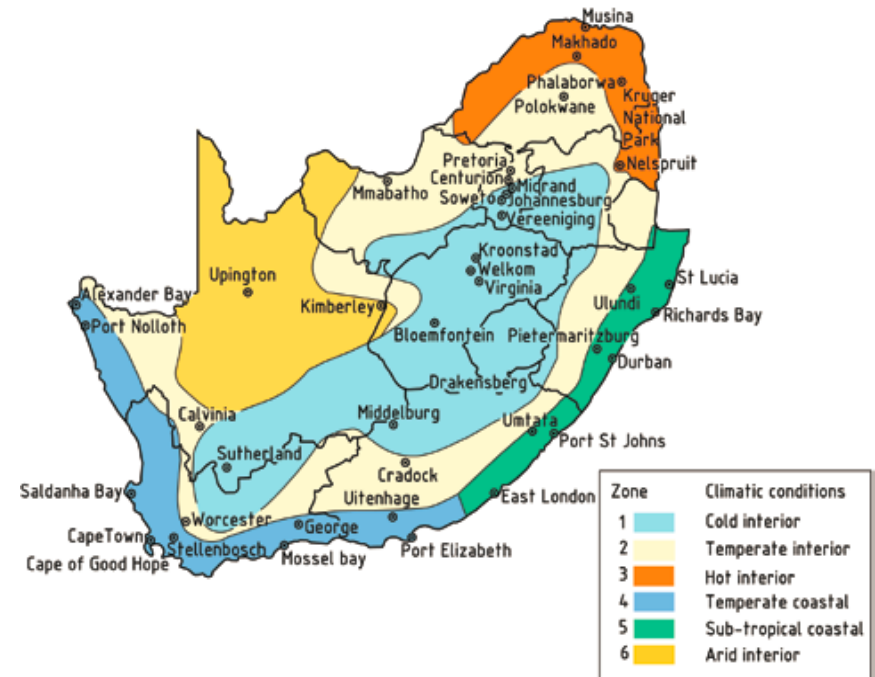
- Ceiling Insulation Specification
 - Fibre Glass Blanket thickness: 100mm / 130mm
- Performance criteria:
 - K-value: 0.040 W/mK (ASTM C518)
 - Combustibility: Non-combustible (SANS 10177 Part 5)
 - Fire Spread index rating: Class 1 (SANS 10177: Part 3)
 - Fire Spread index rating: Class A1, S1 (EN 13823)
 - Reaction to fire: Euroclass A1 (EN 13501-01)
- Specification:
 - Lay (100mm/130mm) Fibre Glass insulation (Non-combustible and Class 1 fire index rating) on the ceiling ensuring that it fits tightly between the tie beams.

A typical un-insulated home loses and gains up to 35% of its energy through the ceiling and this can be dramatically reduced by installing insulation of the correct thickness.

Example of heat flow and R-value calculation of a roof system



Insulation by Geographic Area



- SA divided into 6 climatic zones according to humidity and temperature variation (important for establishing **R-value** requirement for ceiling)

Climatic Zones	1	2	3	4	5	6
Minimum required total R-value (m ² K/W) of your entire roof	3.7	3.2	2.7	3.7	2.7	3.5
Direction of heat flow	↑	↑	↑	↓	↑	↑

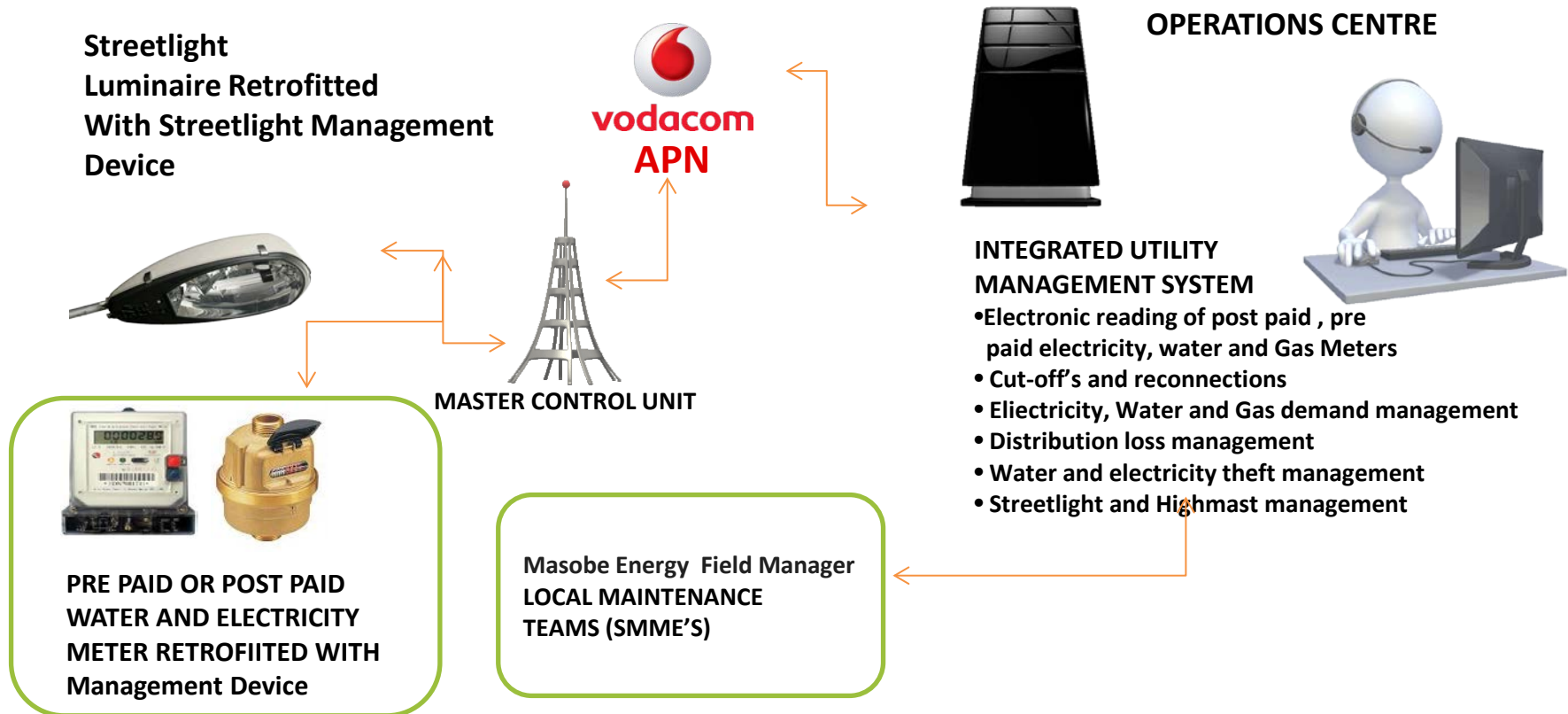
Must achieve minimum R-value specified above
Heat flow indicates the direction your home loses or gains heat through the roof in each climatic zone

SOLAR POWERED TRAFFIC SIGNALS

- SOLAR MODULES – FLEXIBLE
 - NO GLASS, UNBREAKABLE.
 - HIGHER SHADE TOLLERANCE THAN CRYSTALLINE
 - EASY TO CLEAN
- BATTER AUTONOMY - 5 DAYS, 80% DEPTH OF DISCHARGE
 - TUBULAR GEL SEALED BATTERIES
 - EXTREME TEMPERATURE TOLLERANCE (RATED TO 55%)
- 8-10 YEARS LIFE EXPECTANCY
- 100% INDEPENDENT OF THE GRID.
- RELIABLE, CLEAN ENERGY.
- DURABLE AND THEFT RESISTANT
- LOW MAINTENANCE
- REMOTE MONITORING



SMART METERING



SMART METERING OFFERING

Electricity meters:

- The solution retrofits a current Digital electricity meter (Bulk and consumer) and upgrades it into an advanced post or pre-paid meter.
 - ✓ Should you have these type of meters no new meters is required and only needs to be retrofitted with our Calluna Trading Advanced Meter Technology.
 - ✓ Should you have to replace old analogue meters the replacement costs are not excessive as you do not have to acquire an expensive meter.

Features:

- You can change the post-paid and pre-paid behavior without changing the meter.
- Meter will be electronic read, Electronically cut and Electronically reconnect
- Come standard with tamper alarms
- Come standard Time of use measurement capability

SMART METERING OFFERING

Water meters:

- The solution retrofits a current Pulse water meter (Bulk and consumer) and upgrades it into an advanced post or pre-paid meter.
 - ✓ Should you have these type of meters no new meters is required and only needs to be retrofitted with our Calluna Trading Advanced Meter Technology.
 - ✓ Should you have to replace old analogue meters the replacement costs are not excessive as you do not have to acquire an expensive meter.

Features:

- You can change the post-paid and pre-paid behavior without changing the meter.
- Meter will be electronic read, Electronically restricted and Electronically reconnect
- Come standard with tamper alarms
- Water leaks and illegal connections



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THANK YOU FOR YOUR TIME