AMEU/SARPA EC BRANCH CONFERENCE INVITE

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CASE STUDY LPU – REVENUE ENHANCEMENT



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COMPANY OVERVIEW

- Utilities World (Pty) Ltd is a Blue Label Telecoms company, with whom we provide an end-to-end solution.
- The management and staff of Utilities World have been involved in the Prepayment Electricity Industry from the inception of Prepayment in South Africa.
- With over 120 years of collective experience within the industry including the design and manufacture of meters, vending system design and deployment and turnkey project management.
- Whilst the core focus of Utilities World remains the design of Prepayment Revenue Management software, our in-depth experience within the prepayment sector allows us to provide our customers with superior levels of service and support.











WHO

WE ARE

Our Services Division is key to delivering the promise of the Utilities World Brand. We drive our business as being customer-centric and we provide a host of solutions, products and services engineered and shaped to meet the needs of our valued customers.



What We Offer

FOCUS OF PRESENTATION

- Beyers Naude Local Municipality
 - Revenue Enhancement LPU Project Mandate
- Large Power Users (LPU) Automated Meter Reading (AMR) Management System
- Benefits to Utility and End-Consumer
- Funded Models
- Non-Funded Model



LPU Project

- Revenue losses occur at various levels in the metering value chain. The aim is to minimize these losses throughout
- Assist the municipality with curbing revenue/energy losses by using technology (AMR compatible meters + AMR system)
- Phase 1 Funding Model
 - Installed 66 AMR compatible meters
- Phase 2 Non-Funding Model
 - Graaff Reinet Businesses
 - Over 30 meters installed
 - Farms
 - Over 170 meters installed
 - Businesses in other Towns (Abeerdeen, Jansenville and Willowmore)
 - Over 50 meters installed

LPU ARM Management System

- Metering monitoring reflecting half hourly current value consumption.
- Various programming and setup options for your measuring device(s)
- Visibility of your reactive energy and demand
- Profile Graphs reflecting consumption
- Ability to calculate Time of use consumption
- Monitoring phasor values including power factor
- Historical data comparison (kWh, kVA, Rands etc)
- Data import/export capabilities
 - Both technical and FMS compatible
- Different tariffs structures capabilities
- Meter Events Log (tamper, lost phase etc.)
- Ability to customize various reports
- Ability to read different meter types

LPU Online Meter Reading and Management System

Half Hour Values



LPU Online Meter Reading and Management System

Time of Use (TOU)



Sun Nov 07 2021 00:00 to Sun Nov 14 2021 00:00



LPU - Process

- Audit and Inspect all LPU Customers to ensure
 - Installations accuracy
 - Billing accuracy
- Typical technical faults recorded
 - Incorrect CT/VT wiring
 - Incorrect CT /VT ratios used
- Correction and normalization of installations with AMR meters
- Update and correct critical information for improved billing
- Monitor billing improvement and action billing anomalies





LPU AMR System Benefits

Utility

WHAT

WE HAVE

LEARNED!

- Accurate monthly meter readings (No estimates)
- Monitoring consumption per customer per tariff type
 - Facilitate supply upgrade / downgrade applications
- Meter / Installation faults are identified quickly
- Utility is enabled to compare usage/consumption on the Eskom Intake check meter to the Eskom billing statement
- Measuring the consumption fed back to the grid where customers have their own generation of energy (solar, wind, etc.)
- Measure 4 quadrant consumption (geared for the future of energy)
 - Measure both import (Utility to client) and export (client to Utility)

End-Customer

- End-customer start trusting billing data from the Utility
- End-customer uses AMR system for budgeting purposes
- Customer is enabled to compare usage/consumption on the meter to the municipal statement
- Customer use load profile values for new solar installations (planning)

Solar – Load Profile

WHAT WE HAVE LEARNED!

		Munic to Client	Client to Munic	
		kW from Grid	kW To Grid (Solar)	
"DATE"	"TIME"	P1 (per kW)	"P2 (per kW)"	Comments
2022-04-15	08:00:00	5.9	0	
2022-04-15	08:30:00	4	0	
2022-04-15	09:00:00	7.3	0	
2022-04-15	09:30:00	4.4	0	
2022-04-15	10:00:00	1.9	0.2	Uses Solar and Grid and Pushed Back
2022-04-15	10:30:00	2.8	0	
2022-04-15	11:00:00	0.8	0.7	
2022-04-15	11:30:00	1	0.7	
2022-04-15	12:00:00	0	0.8	Full Solar & Push Back
2022-04-15	12:30:00	0.1	1	
2022-04-15	13:00:00	1.7	0.6	
2022-04-15	13:30:00	2.7	0.7	
2022-04-15	14:00:00	4.4	0.4	
2022-04-15	14:30:00	6.8	0	
2022-04-15	15:00:00	5.1	0.2	
2022-04-15	15:30:00	4.5	0.1	
2022-04-15	16:00:00	8.3	0	
2022-04-15	16:30:00	8.7	0	
2022-04-15	17:00:00	11.6	0	



FUNDED MODEL

- Utilities World has the appetite for investing in municipal metering infrastructure at risk, meaning we only get paid for our services if we demonstrate an improvement in revenue collection as a result of the work we do for the municipality.
- Therefore, there is no financial risk to the municipality, only upside.
- Before kick off the revenue protection project, BASELINE (average monthly revenue collected by the municipality over the last 12 months) per LPU CONSUMER, to be calculated and agreed upon with the Municipality
- Baselines per site/customer
- Should the monthly revenue increase above the BASELINE set above, then Utilities World gets paid a percentage (%) of the portion of revenue achieved ABOVE THE BASELINE (per consumer) for the duration of the contract.
- NB, we do not share in any revenue achieved up to the BASELINE, only ABOVE THE BASELINE
- The funding model excluded non-revenue generating meters e.g. Internal Meters, Eskom check meters, etc.



We-Pay-for-Everything, Please Share the Upside with Us!



FUNDED MODEL - Baseline

Month	Baseline	Consumption	Difference
Jun-21	R 2,040,228.20	R 2,446,419.54	20%
Jul-21	R 2,040,228.20	R 2,759,069.36	35%
Aug-21	R 2,040,228.20	R 2,899,137.83	42%
Sep-21	R 2,040,228.20	R 3,019,616.31	48%
Oct-21	R 2,040,228.20	R 2,760,036.00	35%
Nov-21	R 2,040,228.20	R 2,570,155.70	26%
Dec-21	R 2,040,228.20	R 2,467,426.89	21%
Jan-22	R 2,040,228.20	R 2,820,895.85	38%
Feb-22	R 2,040,228.20	R 3,158,173.34	55%
Mar-22	R 2,040,228.20	R 2,738,612.67	34%
Apr-22	R 2,040,228.20	R 2,593,080.22	27%
May-22	R 2,040,228.20	R 2,684,697.00	32%
Jun-22	R 2,040,228.20	R 2,903,370.84	42%



Baseline vs Consumption

----Baseline ----Consumption



NON - FUNDED MODEL

- Replacement of Old technology (AMR system)
- Other sites with CB size less than 100AMP
 - Only AMR compatible meters (not old disc meters)
 - Schools, Clinics, Police Station, etc
 - Cellphone Towers
- Non-Revenue Generating meters (Utility Internal Meter)
- Eskom Intake Check Meters

In Conclusion

- LPU project assist the Utility to monitor
 - LPU consumption correctly
 - Ensure correct installations
 - Early fraud detection
- Ring-fencing of energy consumption
 - Monitor technical losses
 - Monitor unaccounted revenue losses
 - Forward planning for upgrading the Eskom Intakes
 - Monitoring losses from Eskom Intake to end-consumer
- Budgeting (Utility and end-customer)







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