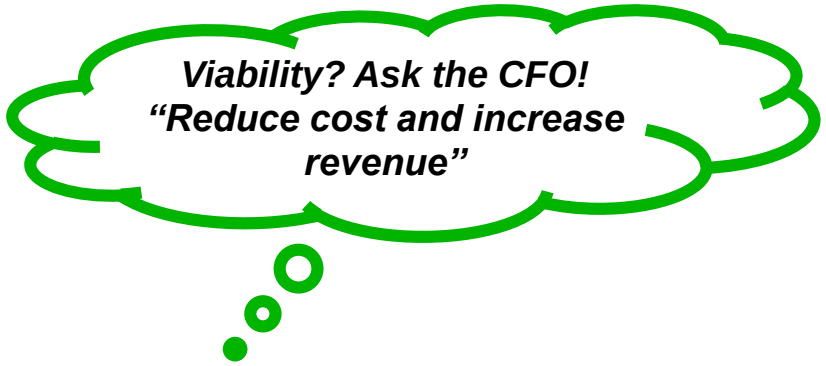
The Association of Electricity Distribution Undertakings in Namibia, AEDU Namibia

AEDU NAMIBIA TECHNICAL CONFERENCE

THEME: "Ensuring the Long-Term Viability of Namibia's Electricity Distribution Through Adaptability and Innovation"

12-14 MARCH 2025 Swakopmund, Namibia



"Enabling the Smart Grid of Tomorrow through MV/LV Secondary Plant Monitoring and Automation".

Jako Winter
CEO
SmartGrid Technologies (Pty) Ltd
www.igrid.co.za

The cost of electricity

12% - 16% increases every year

SCHEDULE OF APPROVED TARIFFS (2024/2025)

NAMPOWER (PTY) LTD

TIME OF USE TARIFF SCHEDULE

TYPE	CUSTOMER SERVICE CHARGE	POINT OF SUPPLY CHARGE		MAXIMUM DEMAND CHARGE		NETWORK ACCESS CHARGE	
		N$/PoS/Month		N$/kVA	N$/kW	N$/kVA	N$/kW
	N$/Customer /Month	No Diversity/ = < 10 MW	With Diversity/ > 10 MW	Peak and Standard		All Periods	
Tariff > 33kV	10,250.00	4,950.00	6,720.00	107.86	118.20	100.41	110.04
Tariff =< 33 kV	10,250.00	4,950.00	6,720.00	112.17	122.93	104.42	114.45

CHARGES					
TYPE	PERIODS			LEVIES	
	Peak	Standard	Off-peak	NEF LEVY	ECB LEVY
	c/kWh	c/kWh	c/kWh	c/kWh	c/kWh
Energy Tariff > 33kV	177.00	132.75	88.49	1.600	2.120
Energy Tariff =< 33 kV	180.53	135.39	90.28	1.600	2.120
Losses >33kV	19.93	14.95	9.96	-	-
Losses =< 33kV	20.33	15.24	10.17	-	-
Reliability	10.96	10.96	10.96	-	-
Long Run Marginal Cost	-	-	-	-	-

- ***Notified Maximum Demand (NMD) Penalty Charge***

The NMD Penalty Charge shall be 100% of the ECB approved NamPower Maximum Demand Charge PLUS Network Access Charge on capacity utilised over and above the customer's contractual NMD, exceeding for three (3) consecutive months, payable as from month three (3).

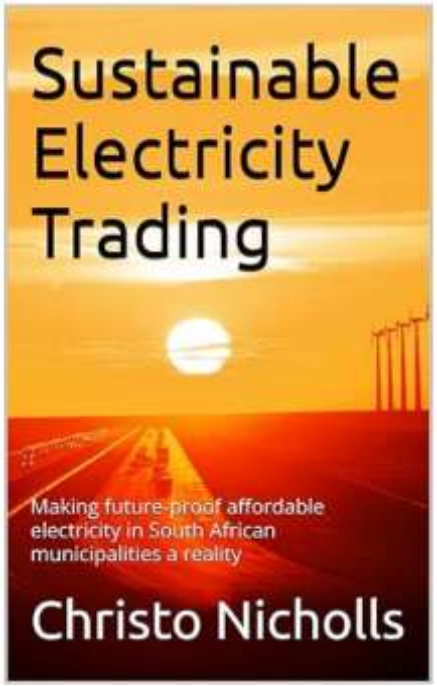
The cost of non-revenue electricity

- Technical:
  - Long outages, non-metered points, incorrect CT's, incorrect meter config
- Non-Technical
  - incorrect billing, theft, tariff imbalance (high peak tariff sell at flat rate), not incentivising SSEG+Battery feed in
- Unsustainable increase in electricity costs and prices to consumers
  - Defecting consumers (your highest users and best payers)
  - Non/reduced payment (your poorest cannot afford it anymore)
  - Stifled economic growth due to high prices
  - No funds for improvements in the distribution grid and systems.

The death spiral of a utility!

❖ **Where can we make an immediate difference?**

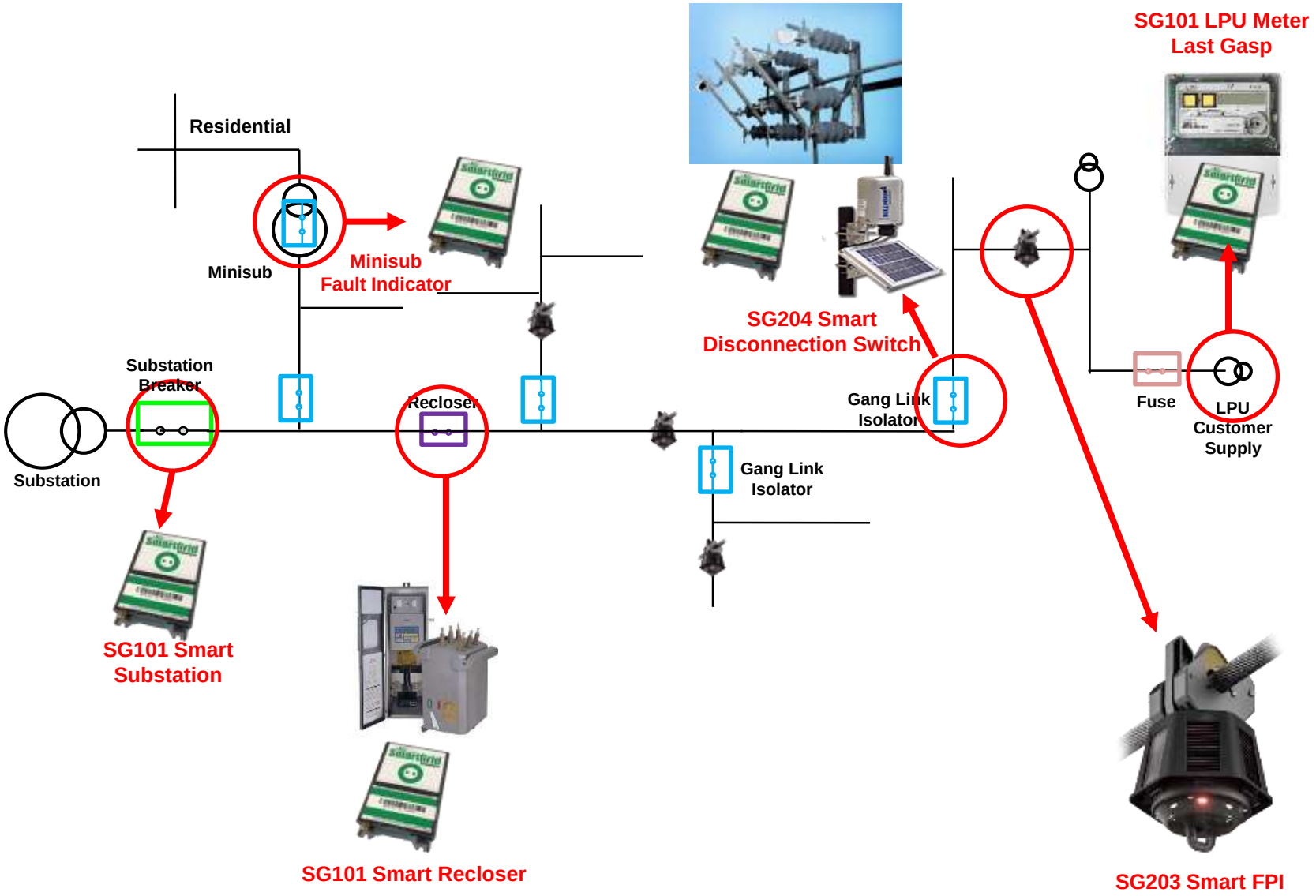
Is there a way to solve the viability equation through innovation and change?



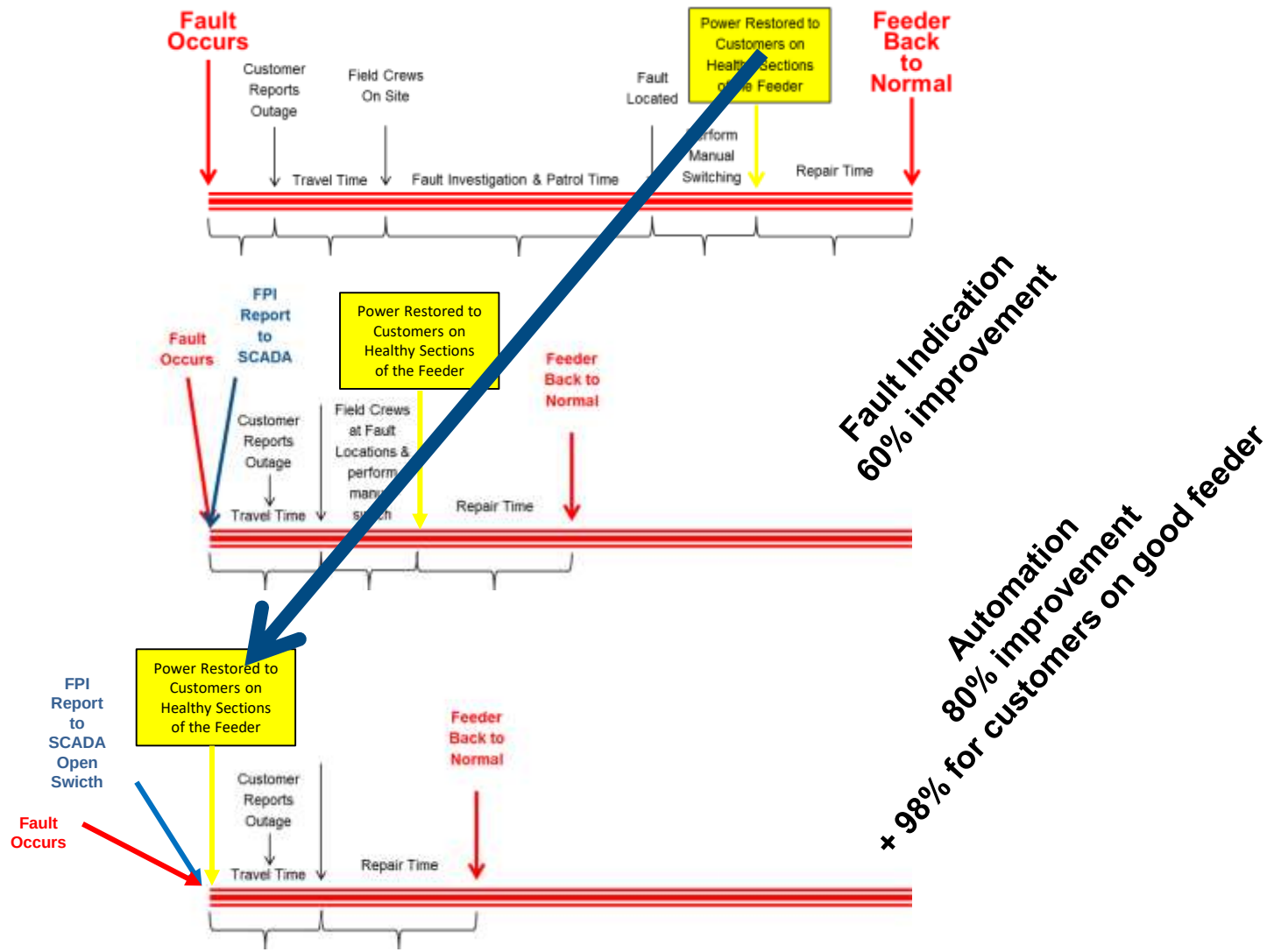
- ✓ Reduce outage duration and frequency of technical faults
- ✓ Reduce operational cost with efficiency improvements
- ✓ Measure and monitor what goes in and what gets billed
- ✓ Buy low sell high, shift the load

Enabling the long term viability through innovation and adaptability

Increase Reliability - Monitor and Automate



How will the automation improve efficiency



Enabling long term viability through innovation and adaptability

Increase Profit - Use the Smart in Smart Meters

Load Switch
Manage KVA
Max Demand

SG101
Check Meter
KVA Monitor

SG101 LPU Smart Meter
Motorised Breaker

SG106 Residential
Smart Meter
SSEG

Residential

Minisub /
Transformer

Substation
Breaker

Substation

Recloser

Motorised
Remote Link

Motorised
Remote Link

Fuse

LPU
Customer
Supply

Energy Storage Charge
off-peak for peak use

Buy Low Off-Peak @ N$0.90 not at N$1.80
Sell High at N$2.80 – N$3.30

Enabling the Smart Grid of Tomorrow.... Today.