

# SARPA Convention 2016

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# UTILITY METERING:

**Choosing cheap in the short term versus a higher upfront cost with lower long term operating costs**

## **Summary of Topics to be discussed:**

- **The Value of Security in Metering Systems (New STS Technology)**
- **The Replacement Costs of Proprietary Solutions**
- **Known Risks versus Unidentified Risks - How much control do you have?**

- **STS Technology**
  - **Designed around key management**
  - **Global Prepayment Standard**
  - **Known and Mitigated Risks over a 20 year period**
  - **Interoperability**
  - **Existing Payment Infrastructure (cost saving)**

- **Smart Metering**

- **Wide variety – Is there interoperability?**
- **Combination of Smart and STS (NRS 049)**

- **Prepayment**
  - **The Key to Revenue Protection**
  - **Lower risks of bad debt**
  - **Improved Cash Flow**
  - **Which Prepayment Technology to adopt? (whether standalone or incorporated into a Smart Metering System)**

# Where to use Smart Meters and where not to.

- **Dept Of Energy - > 1000kWh should have time of use**
- **STS Technology does support currency Tokens**
- **Expensive Infrastructure and expensive operational costs**
- **Cash strapped Municipalities should choose wisely**

## The value of Security.

- **Any system that has the potential for financial benefit to a criminal will be attacked.**
- **The greater the value, the greater the risk, hence the need for proportional security**
- **In the event of an attack, can the risk be mitigated?**

# The value of Security.

- **Legacy STS**
- **Known risks and attacks**
- **Theft of a vending station**
- **Abuse of a Supply Group vending Key**
- **No technology (crypto) attacks are known**



## The value of Security. Cont'd

- **Smart Meter Systems**
- **Known risks and attacks**
  - **Cyber Attacks on communication links**
  - **Insufficient protection of Data (who can see when you're not at home)**
  - **Impossible to recover from Cyber attacks**

## The value of Security. Cont'd

- **Fraud from false readings**
- **Remote off-switch vulnerable to malicious attacks**  
**(Refer current Telkom situation)**
- **Who owns the data?**

# The Relative costs of (Prepayment) Solutions

- **Basic Prepayment (STS) (Low Operating cost)**
- **Basic Smart meter.**
- **Advanced Smart meter**
- **Smart Meter with STS600 (new technology)**

# Advantages and cost benefits of Smart meter with STS support (NRS049)

- **The most costly exercise is undoubtedly replacing a meter, followed by ongoing support and operations**
- **Choice to use STS prepayment only until infrastructure and consumption make it viable to implement the Smart infrastructure**

## New Feature set of STS600

- **Key Expiry and Refresh**
- **Unit and Currency Limits on a vending Key**
- **New Algorithm for meters (Misty-1)**
- **DKGA04**
- **TID Rollover**
- **Currency Tokens (also in recent legacy systems)**

# SUMMARY

- **You can only save money you haven't spent**
  - **Debt recovery is expensive, consider Prepayment**
  - **Fraud and theft is expensive, consider Security**
  - **Replacement is expensive, choose Interoperability**

**STS6 has been designed by an Association of Industry**

**Specialists for this market**



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**Thank You!**