

# Eliminating vending variances and postponing the STS TID Rollover

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## Part 1: Eliminating Vending Variances

### Problem Statement

Vending variances occur when there is a financial discrepancy between the value of tokens issued and the corresponding revenue collected.

Once a credit token has been issued by the utility it has inherent value. Utilities are reluctant to grant refunds for unwanted tokens, because they could still be accepted by the corresponding meters.

The Utility usually holds the super vendor responsible for the full value of unwanted tokens.

Unwanted tokens skew the true quantity of prepaid units sold as well as the buying profile of consumers, the latter having a potential financial implication for those with block tariffs.

### Requirements

- The cost and implications of unwanted tokens should not affect Consumers.
- Super vendors should be able to automatically obtain a refund for unwanted tokens.
- A utility should be able to automatically reverse the financial effects of unwanted tokens, and eliminate any possibility of their subsequent fraudulent use.

### Business Case

A nominal charge is levied by the Utility to refund unwanted tokens, which will contribute to the solution costs.

### Solution

“On-line” communication with existing STS prepayment meters is now possible, without incurring the cost of meter replacement.

A token refund request will automatically generate a token of zero units using the same STS information as the unwanted token. The zero units token can be automatically submitted directly to the corresponding STS meter.

If the zero units token is accepted by the meter, the unwanted token will never be able to be accepted by the meter in future, and the value of the unwanted token can be safely refunded by the utility to the vendor.

If the zero units token is not accepted by the meter, it implies the unwanted token has already been accepted by the meter, and the value of the unwanted token is due from the vendor.

## Part 2: Postponing the STS TID Rollover in 2024

### Problem Statement

With currently deployed STS technology ALL STS meters will stop accepting credit tokens on 24th Nov 2024. This is known as the STS TID Rollover event.

### Technical Solutions

As part of the STS 6 implementation changes, the STS Association has published a document **STS 1800-3** outlining a process for Utilities to follow in order to deal with the TID rollover issue. However, this process is logistically challenging requiring all security modules to be replaced, all vending systems to be upgraded and most significantly requires the entry of key change tokens for each and every meter which is logistically challenging given the time remaining.

In order to mitigate the risk of not being able to meet all the requirements by the looming deadline, **conserving TID values** provides an attractive risk mitigation solution.

### Benefits

TID conservation works by significantly extending the TID rollover date, giving a Utility the freedom to selectively adopt STS 6 and follow the STS 1800-3 process at their own desired pace. However as every day goes past between now and Nov 2024, less and less TID values are available for conservation, thus making it imperative for Utilities to act soon.