



# Live Line Technology

Distribution Line Lightning protection  $3\text{kv} \leq 33\text{kv}$

## ZETDC

### Firewall unit project

Line termination & overhead surge line protection

LIVE LINE TECHNOLOGY

T (018) 468 5080

F (018) 468 3303



Presented by : - Kevin Risi Installation 03 March 2017

# ZETDC

## 36kV Firewall unit line surge protection 03 March 2017



### BEFORE

Harare Pomona dump site feeder 36kv – overhead line termination



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36kV Firewall unit line surge protection 03 March 2017



**Blown surge arrester**

3-4 hour replacement.

Poor identification.

Low maintenance - low probability of replacement.

High probability of cable & equipment damage

Staff negative towards replacement.

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### Damaged surge arresters

#### Disadvantages :

- 1) Difficult to identify damaged units.
- 2) Isolate the supply and entire section of the line , to change surge arrester.
- 3) Large amount of customers affected.
- 4) Replace with a spanner. 3-4 hour operation.
- 5) Poor surge arrester quality ( Not EU or ANSI ).



## BEFORE

Harare Pomona dump site feeder 36kv – overhead line

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## INSTALLATION

Harare Pomona dump site feeder 36kv – overhead line termination



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## 36kV Firewall unit line surge protection 03 March 2017

### Firewall surge arresters

#### Advantages :

- 1) Easy to identify damaged units.
- 2) No isolation of the line.
- 3) Small amount of customers affected.
- 4) Replace in 30 seconds with link stick.
- 5) Guaranteed quality ( ANSI ).

## AFTER

Harare Pomona dump site feeder 36kv – overhead line



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## 36kV Firewall unit line surge protection 03 March 2017

### Infrastructure upgrade :

Firewall brackets are a 20-30 year investment.

### Arresters are replaced :

- 1) Faster
- 2) Easier
- 3) Safer

## AFTER

Harare Pomona dump site feeder 36kv – overhead line

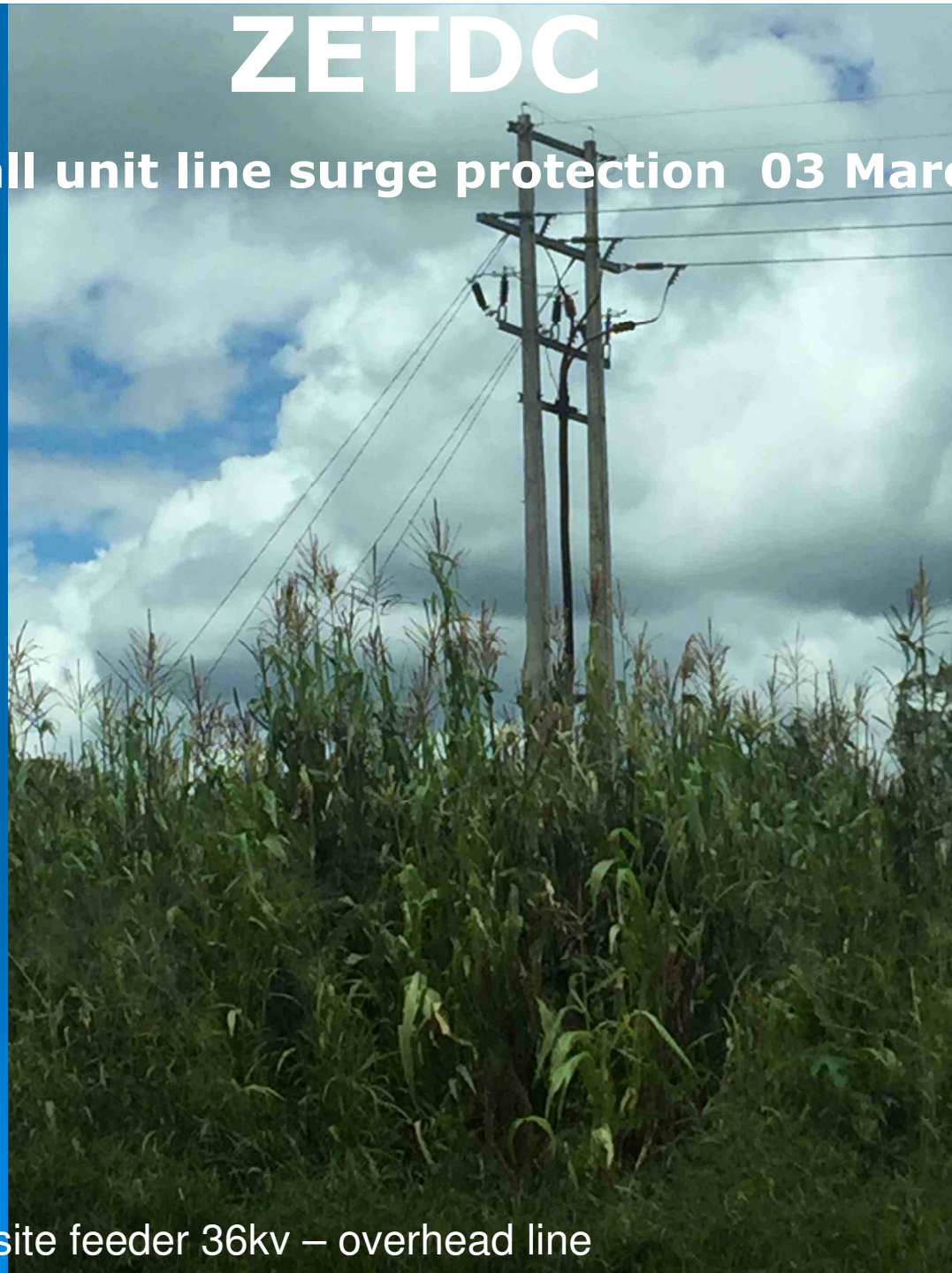


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**36kV Firewall unit line surge protection 03 March 2017**

## Identification :

Firewall brackets enable the surge arrester to be identified from very far away.



## **AFTER**

Harare Pomona dump site feeder 36kv – overhead line



**Thank - you**