THEFT & VANDALISM OF ELECTRICITY AND ITS INFRASTRUCTURE – THE ZIMBABWEAN STORY

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What is theft?

From Wikipedia, the free encyclopedia:
Theft is the taking of another person’s property without that person’s permission or consent, with the intent to deprive the rightful owner of it.

So according to this presentation, I am saying ZESA’s electricity and infrastructure are being taken without its consent or permission. This being done by Zimbabwe’s own, or external citizens.
What is vandalism?

1) According to the Collins English Dictionary: 

**Vandalism** is the wanton or deliberate destruction caused by a vandal or an instance of such destruction.

2) According to Webster’s College Dictionary: 

**Vandalism** is the deliberate destruction or damage of private or public property.

- Coming closer to home, I am saying that there is wanton, deliberate destruction and damage of ZESA’s electricity infrastructure by our own citizens mainly.
What is being stolen or vandalised and why?

- Distribution transformers are being vandalised for their copper windings, oil, bolts and nuts. Some of the clean transformer oil finds its way into restaurants and is used to fry chips.
- Copper conductor and cables are stolen and find their way into South Africa, sometimes en route to China, from our findings. There is a ready market for the copper.
- Transmission pylons are vandalised for their members (angle irons) and nuts & bolts. Tower members (angle-irons) find their way on to scotch-carts and the nuts & bolts have several places where they are made useful.
- Aluminium conductor, when stolen, finds its use on caskets and door handles, as well as the three-legged pots that are used on open fires.
From 2001 to present, we have seen acts of theft and vandalism increasing. Statistics have grown from shocking to astoundingly alarming. In 2001 there were 135 cases countrywide, escalating to 749 in 2007.

A decade or so ago, only small items like miniature circuit breakers (MCBs), service cables and meters would be stolen. This was mainly in communities where there were construction works going on. Locks were introduced for the meter boxes to try and deter thieves.

Now a whole army would be needed to physically protect our network from thieves and vandals!!
A fallen transmission pylon that was vandalised for its bolts and nuts.
Another Vandalised Transmission Pylon—for its tower members
1. Angle irons used on scotch cart

2. Angle-irons fabricated into a harrow
Vandalised Distribution Transformer

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Recovered Stolen Conductor – Stashed in a Tyre
Recovered Copper Windings
Transformer Oil in Containers at a Scene of Crime
Fallen Distribution Structure After Vandals Struck

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The most recent statistics (c/o ZESA Holdings) show that in the first quarter of 2016 (Jan to March 2016) there were 55 cases of theft and vandalism of copper conductor.

Within the same quarter this 2016, there were 57 cases of vandalism of transformers and theft of transformer oil.

From January to December 2014, a total of 139 tons of copper was stolen from ZESA.

These statistics are only for the reported crimes. The figures could be more!
Recovered Copper-neatly rolled up
Recovered Copper
• In 2015 there were **2227** cases of electricity theft, with a total prejudice/value stolen of **USD 822 839-8**

• There were **256** cases of copper conductor theft in 2015. The value of conductor lost was **USD 1 364 324-24** (that is, one million three hundred and sixty-four, three hundred and twenty-four dollars and twenty-four cents)

• 2015 had **67** cases of transformer oil theft and **75** cases of transformer vandalism, with a combined total value of **USD 796 625-24**
Theft and vandalism are impeding the electrification process in Zimbabwe.

New connections are being slowed down since funding now goes to the replacement of stolen components in the network.

The network expansion rate is really affected. More of backward looking, than forward-looking!

All this points to, is reduction in revenue collection by the organisation.
Effects to the Country’s Economy

- Electricity (its presence) drives the economy.
- The absence of electricity affects both agriculture and industry and these two are the drivers of our Zimbabwe.
- Thus theft and vandalism of electricity and the electricity infrastructure equate to serious economic sabotage.
- If tried and convicted in our courts, criminals are now getting a minimum of ten years imprisonment.
Another vandalised transformer
A Football Pitch-size Ground full of Vandalised Transformers at ZESA’s Central Stores

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Copper Recovered on 04 May 2016 – Stashed in a Reserve Fuel Tank of a Haulage Truck

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Theft of Electricity

- With the analogue, Ferraris meters, people would try to slow them down a little by using magnets on the turning discs. This was theft of electricity, but not of the magnitude we now have.
- With the advent of the prepaid meters, theft of electricity has continued, with increased meter by-passes.
- By-passes where direct connections to incoming power are made are also a common crime nowadays.
By-passes:

Above is a 2,5mm black cable used to bypass the load and the supply cables at a house in one of the suburbs.
Direct, unsafe connection at the pole, before the meter

Theft of Electricity
Meter By-pass (the black flexi-cable)
Another Meter By-pass – Underneath the Terminal Cover
Some Deterrences to would-be thieves and vandals

- Zimbabwe’s Electricity Act 13:19 had an amendment 4 of 2010 put in place. Minimum sentences for proven cases are now ten years.
- Internally within the company’s system there are punitive charges loaded on clients who tamper with the meters (attracting as much as USD 700 or more in some cases). We call these charges WOCIs.
- Some communities are now getting together to fund the protection of their essential transformers.
A Deterrent in the Community

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5/27/2016
Protected Pole-mounted Transformer
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Protected Transformer
Personal Experience

- Working on tip-offs, between April and May 2011, I and one of my officers, assisted by officers from ZRP Minerals and Boarder Control Unit, waylaid four trucks, carrying copper, coming from Malawi to South Africa, via Mozambique and Zimbabwe.

- The four trucks (3 haulage and one 2-tonner) had a combined total of 17.6 tons of copper. The copper was cut into small lengths and stashed into bags to look like wheat or maize bran.

- In our Zimbabwean courts it was difficult to prove that the copper was ours, so the trucks and suspects were extradited to Malawi.

- Six of us (2 from ZETDC and 4 ZRP officers) went to testify in Malawi in August/September 2013

- The cases are still to be concluded. One of the suspects skipped bail and left the country, so Malawian Police are still lying in wait for him.
Malawian Truck with Copper
Bags of Maize Bran Mixed with Bags of Copper
Bags of Copper Conductor from One of the Malawian Trucks
One of the Haulage Trucks With Bags of Copper in Container
During the week 16 to 22 August 2015, a few weeks before the PIESA Conference in Zimbabwe, in September 2015, our own PIESA (ZESA) Board Chairman, Eng. Bukhosi Siso had the feeder to his house vandalised and two spans of overhead copper conductor stolen on one of the nights. Unfortunately this happened while he was away on business.

The feeder was repaired using material which could have gone to a new connection!!

This thieving and vandalising is still going on in or at several other places country-wide!
What is ZETDC (ZESA) Doing?

- ZETDC is carrying out re-conductoring exercises countrywide. Copper is being replaced by aluminium.
- ZETDC (ZESA) held an Anti-Vandalism of Electricity Infrastructure and Energy Theft Workshop on 8th July 2015. Various stakeholders were invited.
- At the end of the workshop resolutions were made and timeframes given. These included:
  - Lobbying for the amendment of the current Electricity Act 13:19 to make possession of copper an offence
  - Coming up with new engineering solutions to help curb theft and vandalism
  - Lobbying for the amendment of the Copper Control Act to include the export of copper in its original unprocessed form. Copper dealers are now smelting the copper and exporting it as ingots, making it difficult to link it to conductors and cables.
  - Intensifying public awareness campaigns, opening the eyes of the public to the fact that theft and vandalism slow down the electrification process of the nation.
I believe this situation is not unique to Zimbabwe.

Every one of us in our respective African countries has a story to tell where theft of electricity and vandalism of electricity infrastructure are concerned.

Maybe what differs is the magnitude, depending on the network size and the sophistication of the thieves and/or vandals.
Let us unite as Africans, in the fight against theft of electricity and vandalism of the electricity infrastructure!!

If, or when, we win, then we know our growth will be certain!!