



Infrastructure Theft Presentation

Presentation to the Select Committee on Economic Development

Ayanda Noah: Group Executive Distribution

February 2012

Orientation on the Electricity Value Chain

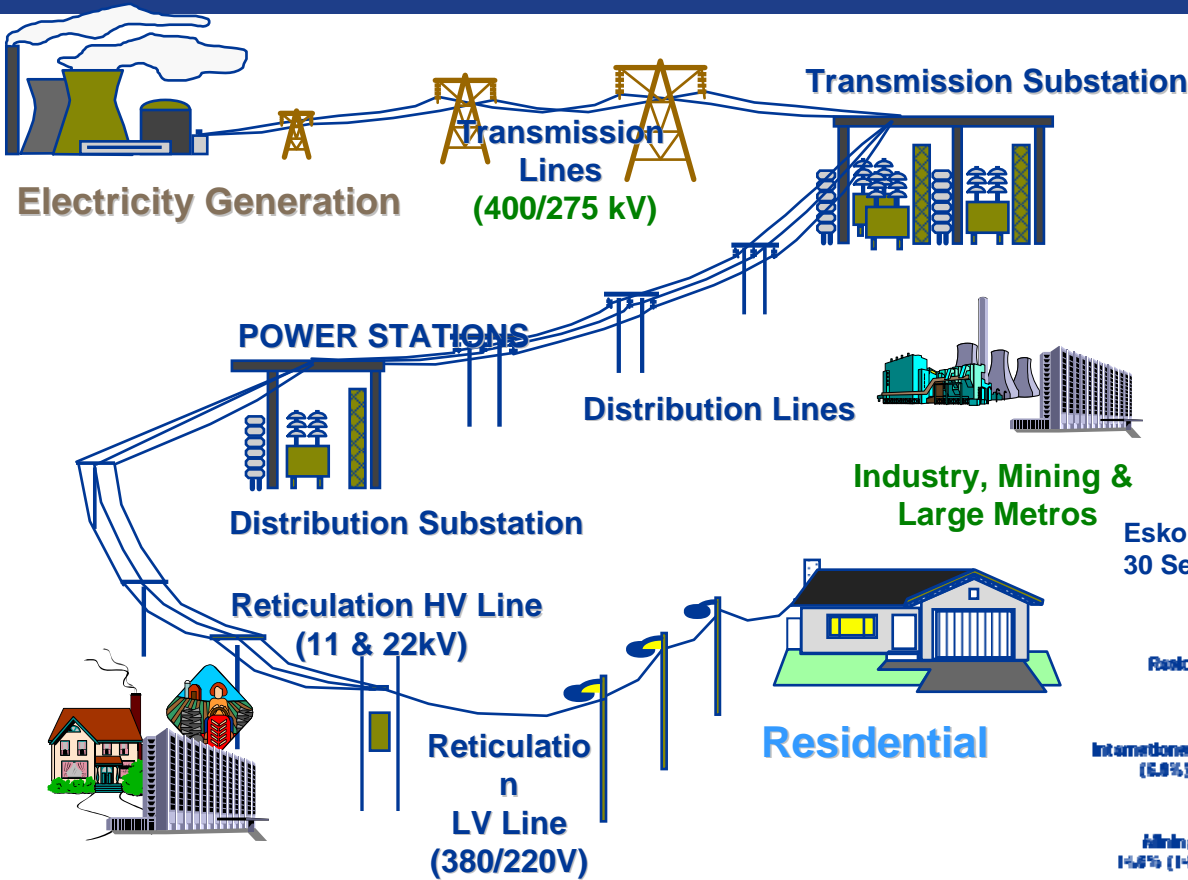
Distribution Division Profile

Problem Statement

Statistics of Incidents

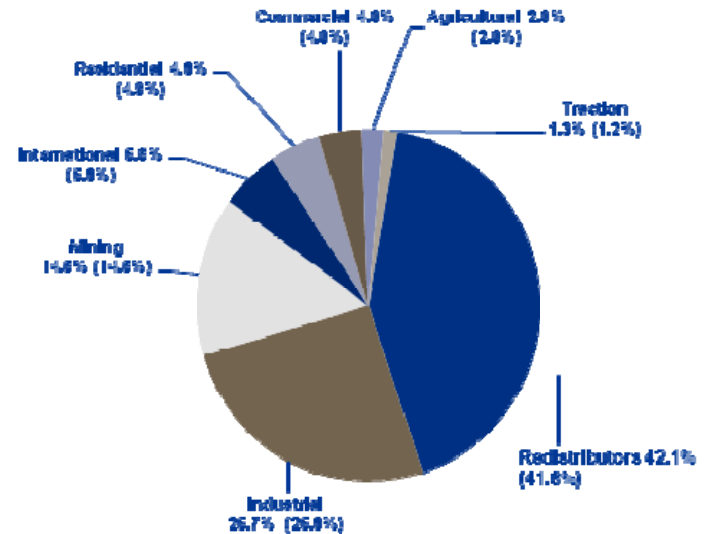
Strategies to Combat Conductor Theft

The Electricity Supply Chain



Industry, Mining & Large Metros

Eskom electricity sales by customer for the half-year ended 30 September 2011 (30 September 2010)



Scope and mandate

To service the customer through provision of reliable electricity by building, operating and maintaining distribution assets, while also acting in the national interest by actively partnering with the wider industry in resolving distribution industry issues and enhancing stakeholder relations

Asset base

308 899 km reticulation lines
46 712 km distribution lines
102 053 MVA transformer capacity
18 882 employees



Organisation structure

- 4.7 million customers nationally
- Nine provinces divided into Customer Network Centres



Highlights and output

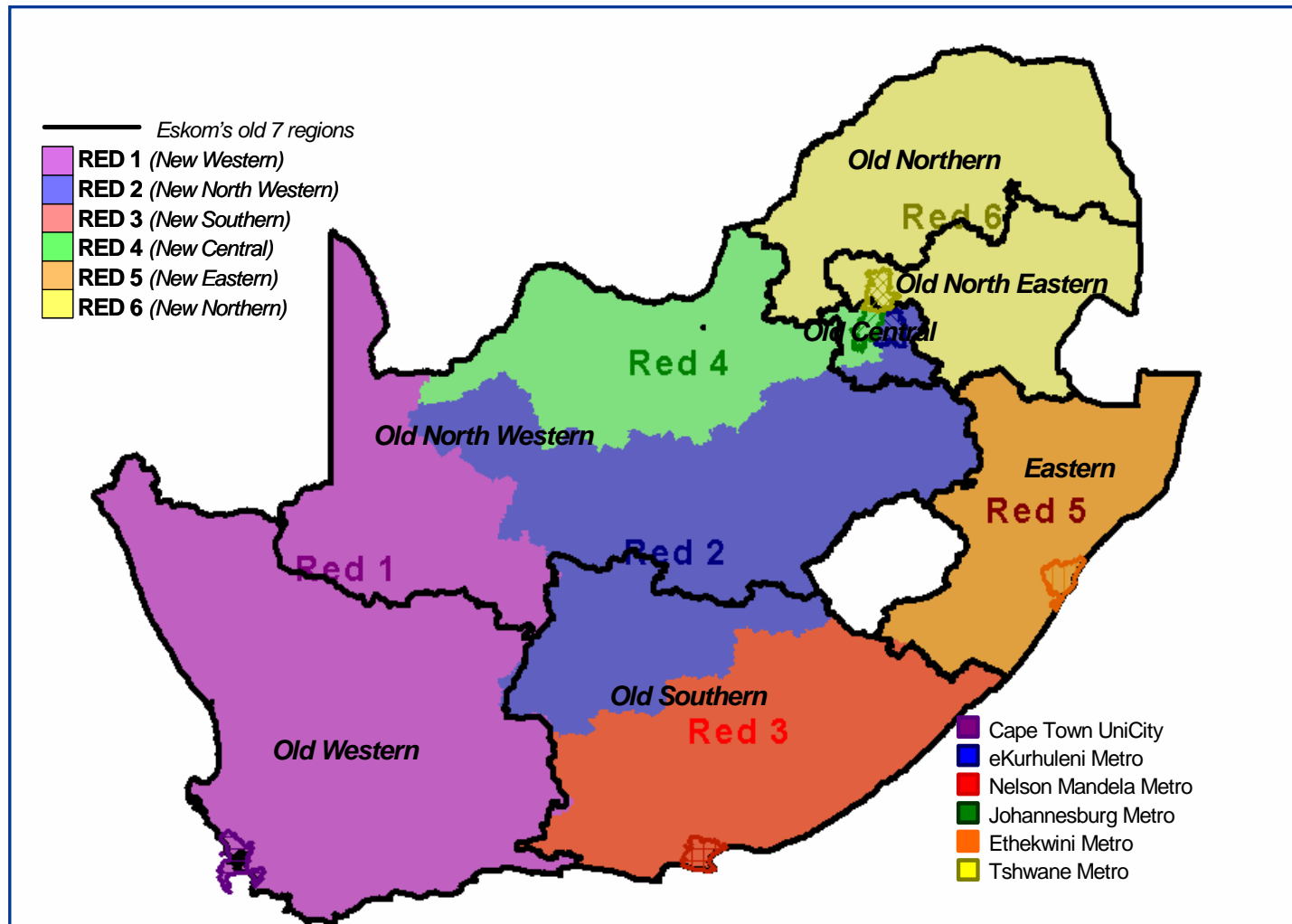
- Improvement of the system average interruption duration index Improved level of energy losses due to increased interventions in the management thereof
- Electrified a total of 4 050 968 homes (2010: 3 901 054) since the inception of the electrification programme in 1991

Key challenges and priorities

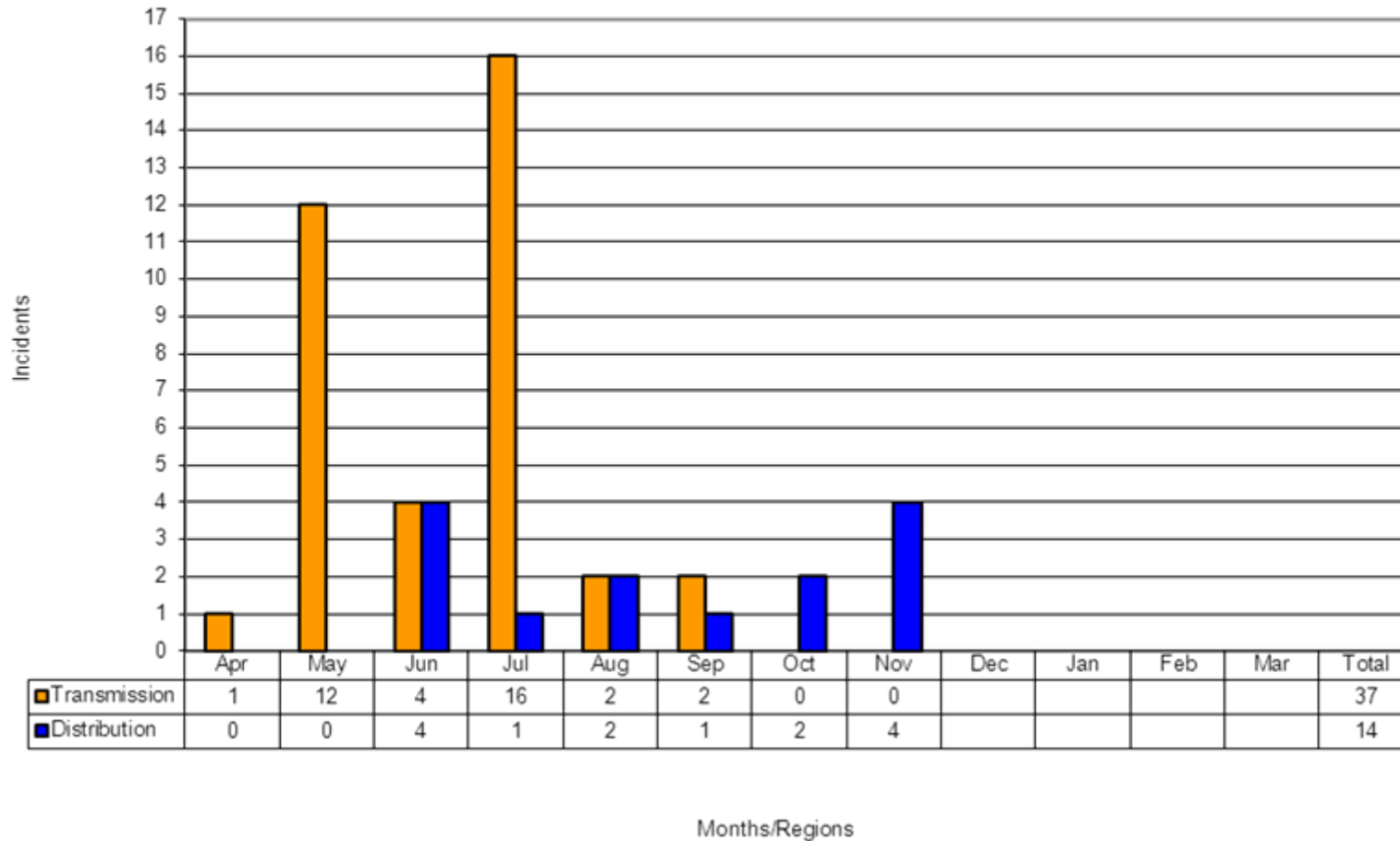
- Step change in safety performance
- Step change in technical performance
- Reduce energy theft
- Active partnering with the Distribution industry in resolving industry issues
- Electrification

- The theft of non-ferrous metals in South Africa has become a serious problem in the past few years impacting negatively on the economy
- This can be attributed to the dramatic increase in the copper and aluminium prices as a result of the growth in international demand for the materials, amongst other factors.
- The sectors mostly affected by theft of non-ferrous metals are Communication, Rail Transport, Eskom and other Utilities.
- Eskom Distribution Division is mostly affected by theft of Non ferrous metals as a result of its vastness, the electricity network capacity/load and infrastructure that run mostly in remote areas in South Africa
- A total number of **1 591** conductor theft incidents were reported during between April and December 2011 (cable **1 399**, overhead conductor **118** and earth straps from substations **74** incidents). Total losses (direct costs) suffered are estimated at **R22, 022,855**. A total of **292** perpetrators were arrested. Material to the value of **R 2, 477,033** was recovered

Regions in relation to provinces

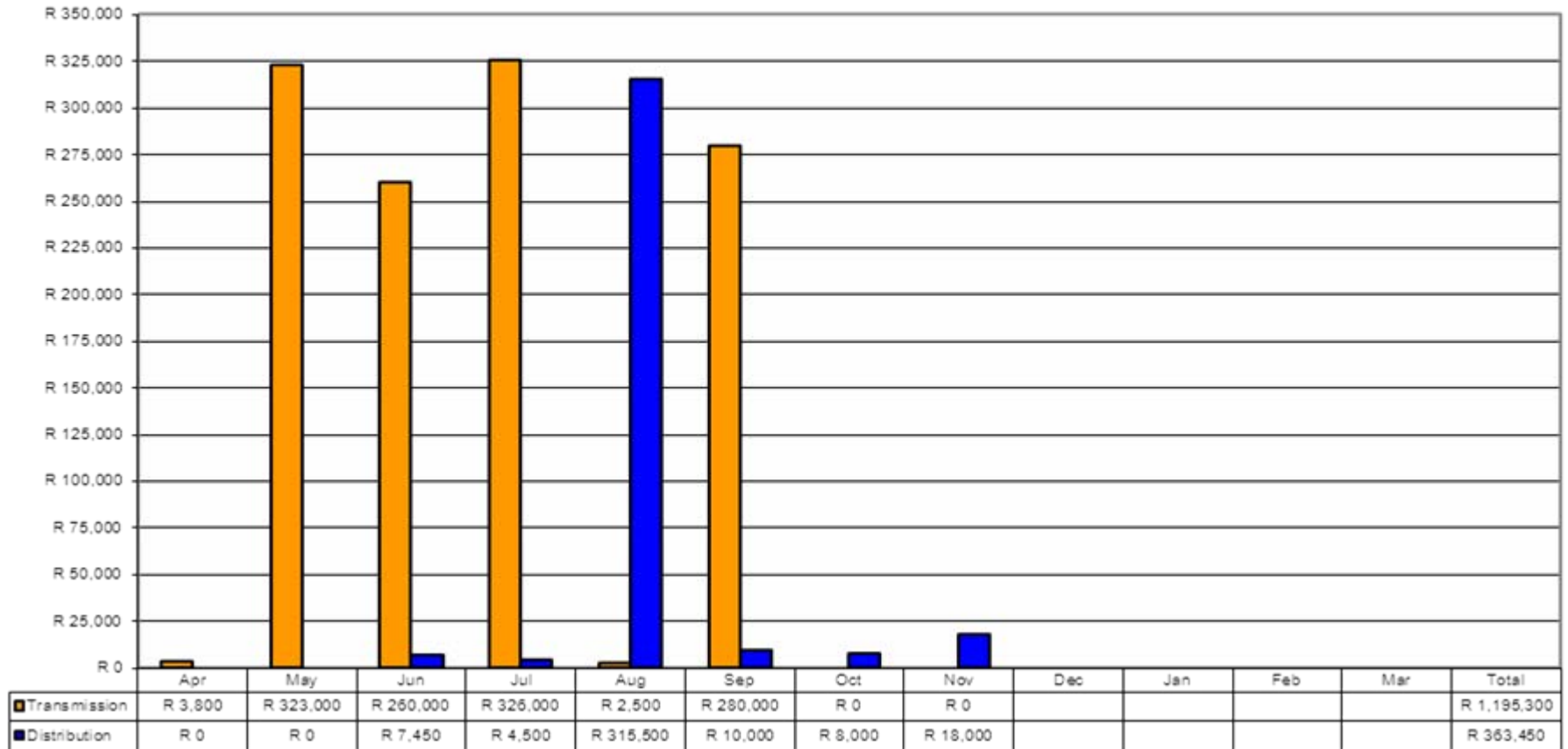


Pylon Theft : Total Incidents per Division : 2011/12



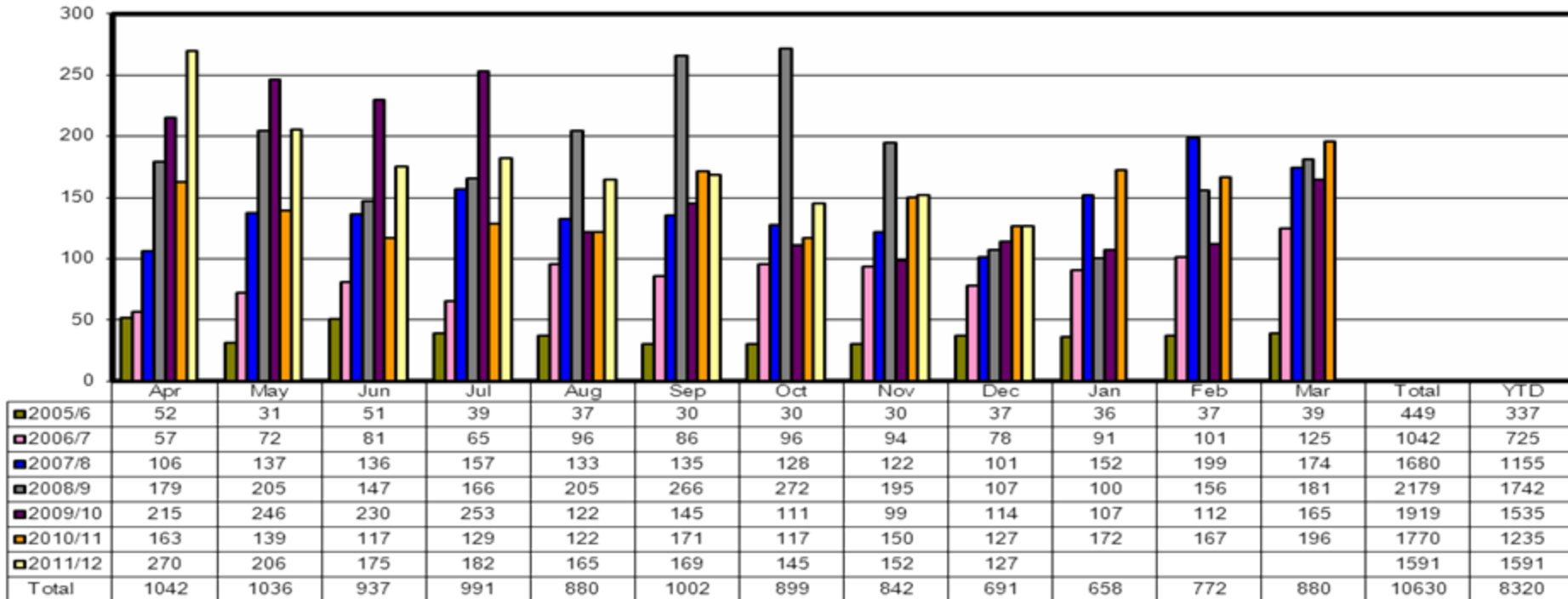
Pylon Theft

Pylon Theft : Total Monetary Value per Division : 2011/12



Distribution: 7 Years Crime Incidents Comparison 2005/6 to 2011/12

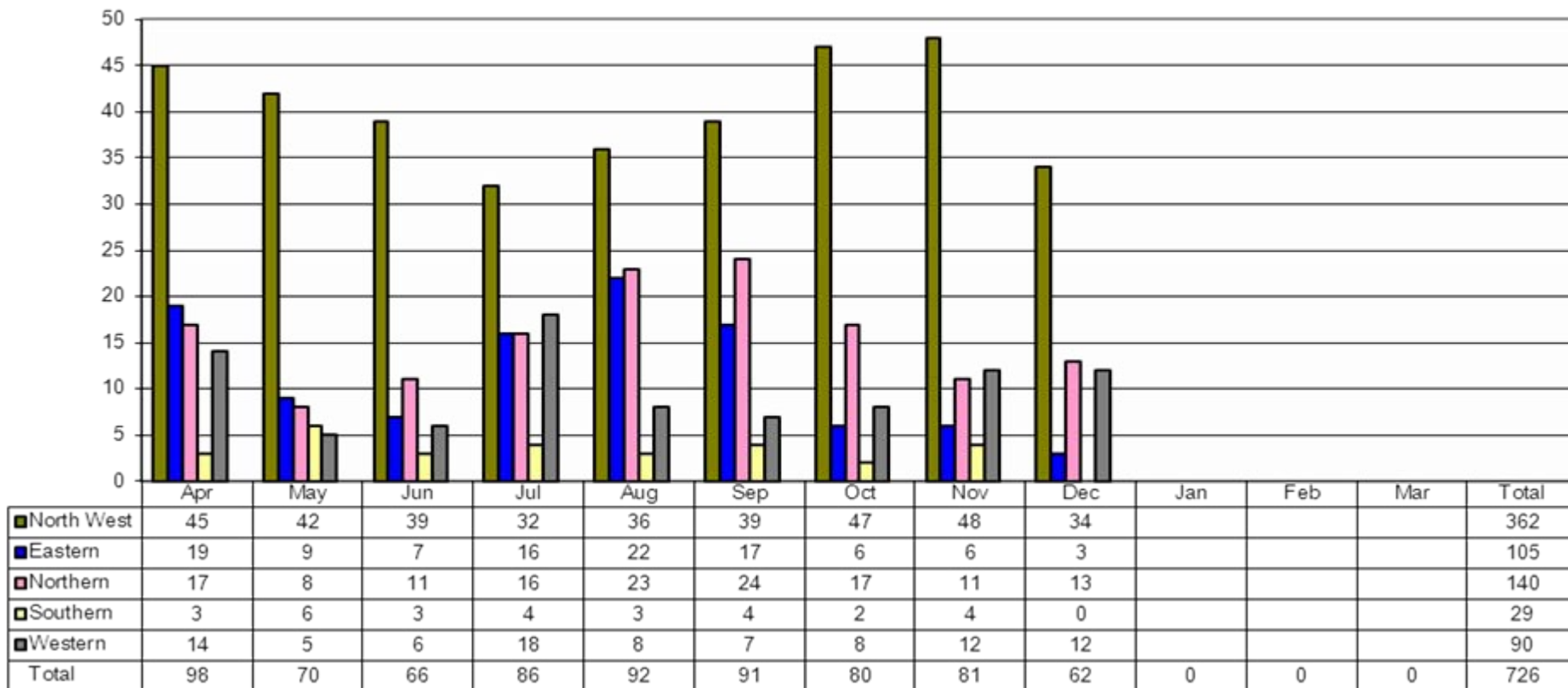
Conductor Theft : Distribution : Total Incidents : 2005/6- 2011/12



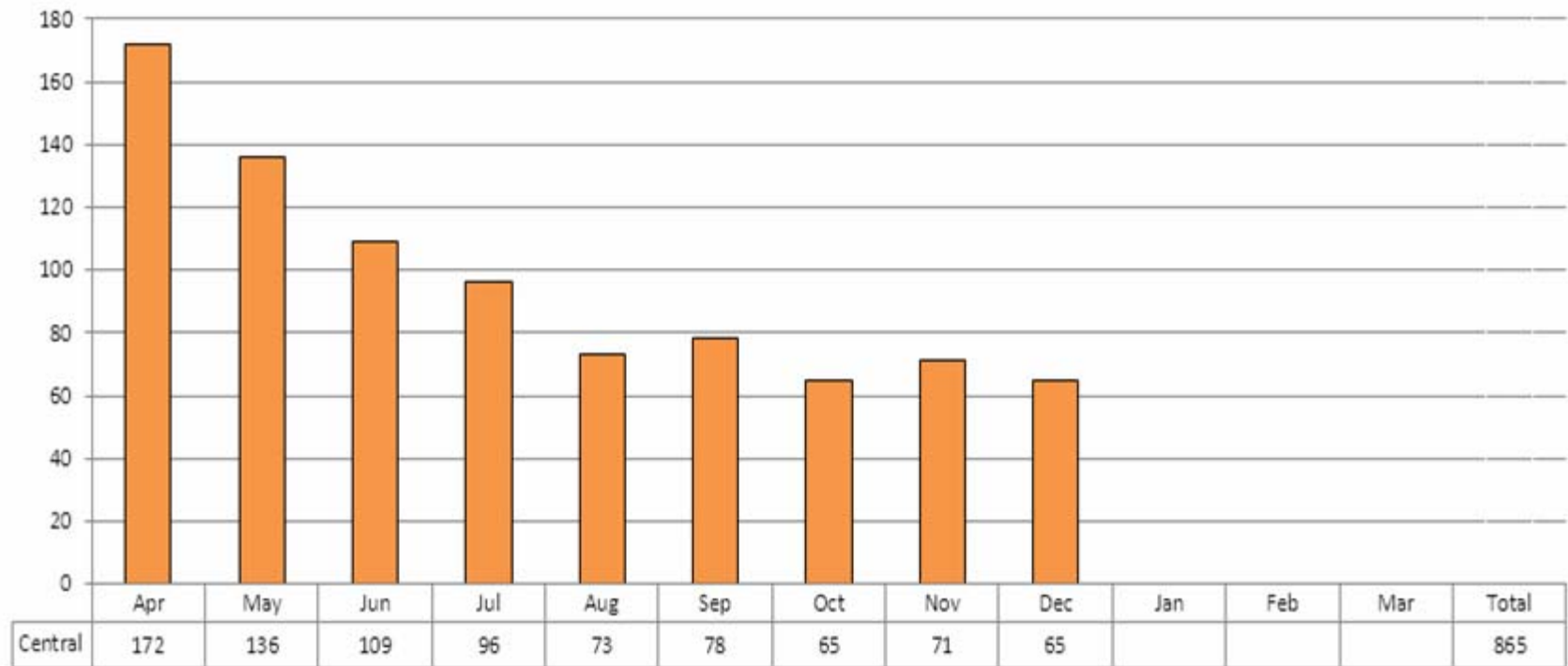
- There is a marked reduction of incidents in 2010/11
- This is mainly due to the increased and coordinated efforts between Law Enforcements Agencies and the industry at large to combat crime before, during and immediately after the 2010 Soccer World Cup.

Conductor Theft Incidents per Region (Excluding Central) – 2011/12

Conductor Theft : Distribution (Excl Central Region) : Total incidents per Region : 2011/12

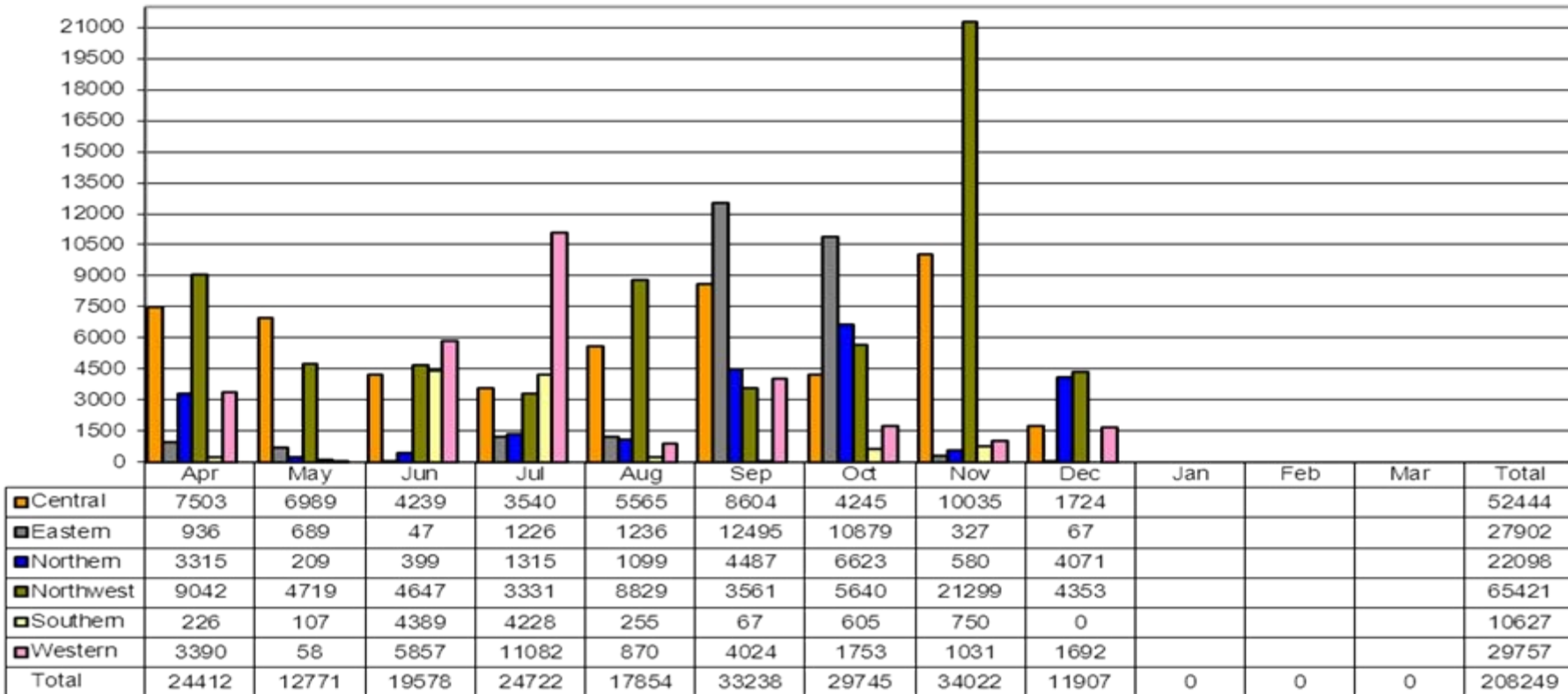


**Conductor theft: Total Incidents for Central Region
2011/2012**

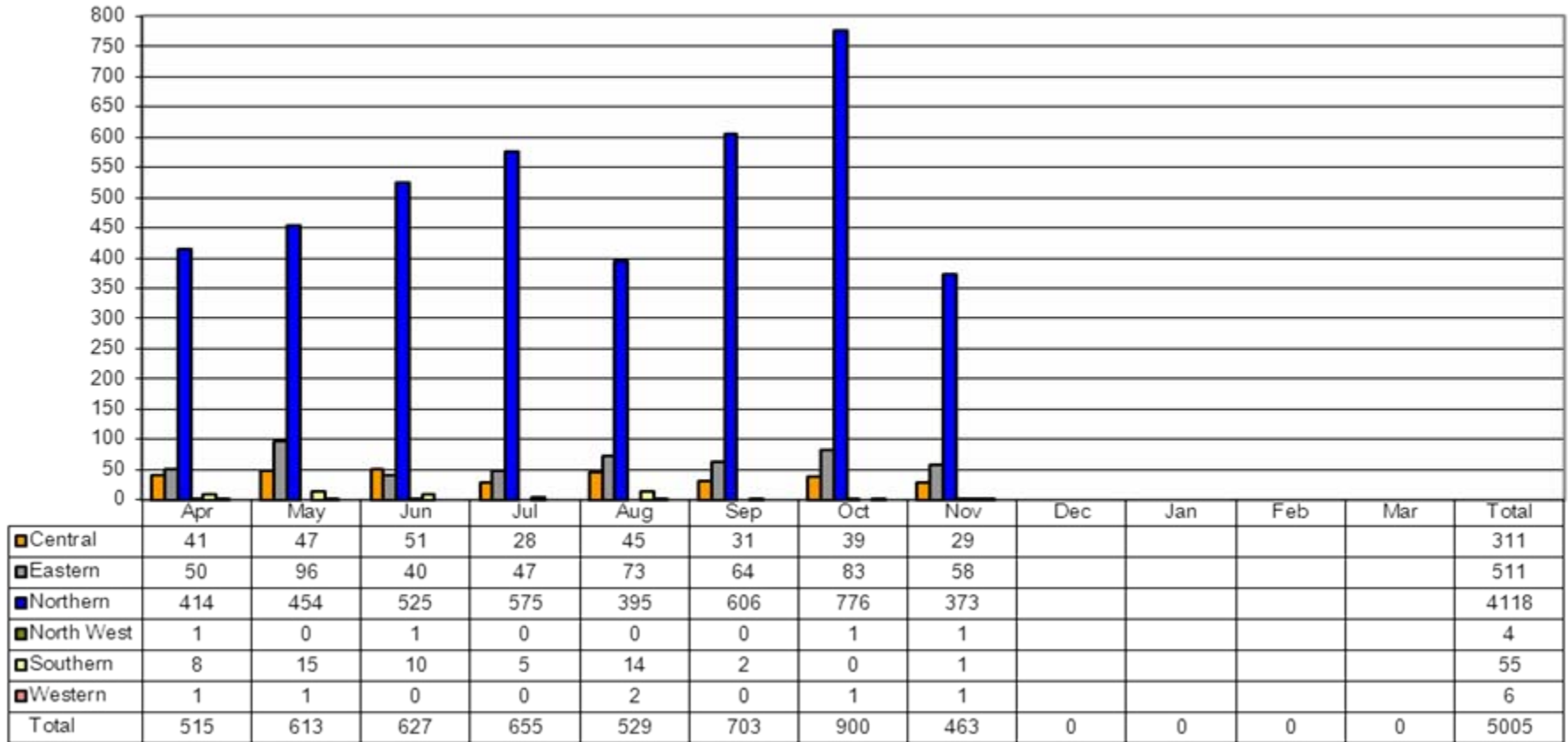


Lengths of Stolen Conductor per Region – 2011/12

Conductor Theft : Distribution : Lengths Stolen per Region (meters) : 2011/12

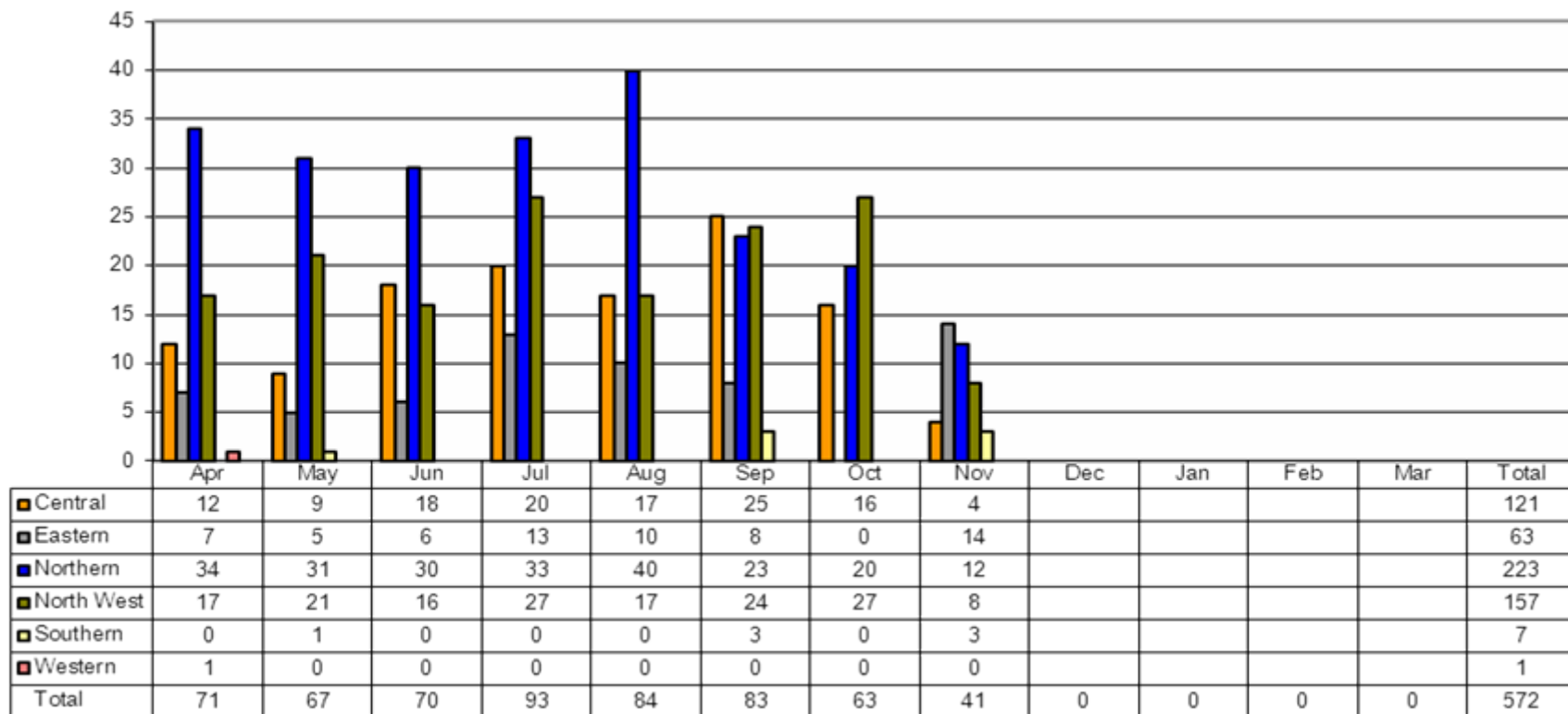


Theft of Airdac : Distribution : Incidents per region 20011/12



Transformer theft

Transformer Theft: Distribution : Total incidents per region: 20011/12



- National security threat
- Injuries & loss of life
- Compromise Security of Supply
- Loss of income (Eskom and business)
- Vandalism/damage, loss of assets
- Civil claims
- National Key Point regulations and governance
- Compliance with the OHS Act



- **Syndicates** armed, dangerous and operating all over the country
- Second hand goods market very strong (scrap metal dealers)
- Bread and butter thieves stealing due to **socio economic conditions**
- **Demand for copper** and conductor influenced by high prices paid
- Lack of expertise and knowledge by law enforcers e.g. SA Police, Magistrates, prosecutors, etc
- Illegal connections market very large and strong (**stealing airdac for re-use**)
- Community scared of identifying known criminals.
- **Lack of awareness** and education in the communities

- **INTERNAL STRATEGIES:**
 - Better improved intelligence network – Risk Spider (Eskom)
 - Eskom Network Crime Equipment Committee (Eskom)
 - Combined Private Investigators (CPI)
 - Conduct surveillance
 - Do line patrols
 - Conduct investigations (Eskom contractor)
 - **Awareness strategy** in conjunction with public safety initiatives (Eskom).

- **EXTERNAL STRATEGIES:**

- Training of law enforcers on impact and material identification being conducted (Public Prosecutors)
- Constructive participation in forums such as Non-Ferrous Crime Combating Committee (NFCCC), with membership as Business Against Crime (BAC), Organized Crime Unit (SAPS), National Prosecution Authority (NPA) and other State Owned Companies
- Scrap dealers disruptive operations conducted
- Enforcement of the new 2nd Hand Goods Act
- **Joint ventures** with other state owned enterprises – Transnet, Telkom, Mining Companies, etc.

- Technology

- ✓ Implementation of alarms systems, monitoring systems and movement sensors in substations to remotely raise the alarm when the security of the premises is breached
- ✓ Implementation of vibration detection, alarm systems and monitoring systems on high risk cables
- ✓ Implementation of alarm systems in all high risk sites to dispatch armed response reaction when criminal activities are detected
- ✓ Implementation of cable marking technology – in conjunction with the cable manufacturers
- ✓ Installation of protective enclosures
- ✓ Installation of cable safe – to ensure that cables are not easily pulled out of the ground



- Intelligence.
 - ✓ The syndicates are always on the lookout for loopholes and trying to be ahead of the utilities, so Intelligence information should be gathered through various sources and used to review the integrated strategy and tactical plans from time to time
 - ✓ Joint intelligent gathering and strategy sharing in forums such as the Non-Ferrous Crime Combating Committee (NFCCC), with membership as Business Against Crime (BAC), Organized Crime Unit (SAPS), National Prosecution Authority (NPA) and other affected organisations

- Physical Security
 - ✓ Create localised armed response teams to be deployed when required. (Combined efforts)
 - ✓ Patrolling of high risk feeders/lines/cables and infrastructure based on intelligence information and previous crime activities and trends. (Combined efforts)
 - ✓ Create a Task Team (SAPS, Eskom, Telkom, Transnet and other utilities) to support the arrests with investigations, case files, dockets, court preparation and evidence
 - ✓ Conduct search operations on Illegal Scrap dealers

- Enforcement / Prosecution
 - ✓ Joint Operations with Law Enforcement Agencies will ensure successful prosecutions. It is important to ensure that the Investigators and Prosecutors work together to ensure efficient evidence collection and case management.
 - ✓ The FULL impact (including consequential losses) of these crimes must always be presented in court to avoid a situation where the magistrate / judge only considers the value the stolen cable and regard the cases as minor resulting in lesser sentences (like fine or suspended sentences) for the accused
 - ✓ Work with SAPS to ensure that the 2nd Hand Goods Act is implemented – this Act will regulate trading in scrap metals like copper and should make the policing of copper theft a little easier

Awareness

- ✓ It is said that :

“The world is a dangerous place to live in; not because of people who are evil, but because of **good** people who don't do anything about it.”

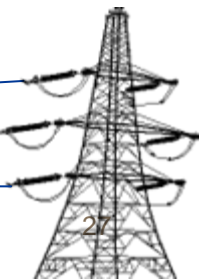
So there is a need to **Inform, Educate and Encourage** South Africans to **be aware** of these crimes and **report** them where they come across them. That way the criminals will have nowhere to hide. **An integrated awareness campaign** (supported by a number of partners from the different sectors) is underway to address this. The **SACCI Barometer** forms part of this campaign

- Combination of technology, intelligence and physical security application.
- Technology (mainly substations)
 - Implementation of alarms systems, monitoring systems and movement sensors in substations to remotely raise the alarm when the security of the premises is breached.
 - Implementation of vibration detection, alarm systems and monitoring systems on high risk cables,
 - Implementation of alarm systems in all high risk sites to dispatch armed response reaction when criminal activities are detected.

- Intelligence.
 - Intelligence information will be gathered by Eskom Corporate through their focussed interventions and programmes (Risk Spider) and the applicable information will be forwarded to the Regional Security Managers to apply and/or react.
 - Regular interactions between Eskom Corporate and the Regional Security Managers will be maintained to exchange information and plans thereby integrate information and activities.
- Prosecution
 - Investigators are to collate evidence, statements, case files, court interventions until conclusion and provide support for prosecutors.

- Physical Security
 - Create localised armed response teams to be deployed when required. (Combined efforts)
 - Patrolling of high risk feeders/lines/cables and infrastructure based on intelligence information and previous crime activities and trends. (Combined efforts)
 - Create a Task Team (Eskom, Telkom or other utilities) to support the arrests with investigations, case files, dockets, court preparation and evidence.
 - Pro-active monitoring, inspections, testing and maintenance of all technology and systems to ensure optimal availability.

Pictures to illustrate the seriousness of the conductor theft crime





Stolen Copper Earth straps



Scrap Dealer Yard – Removing Cable casing



