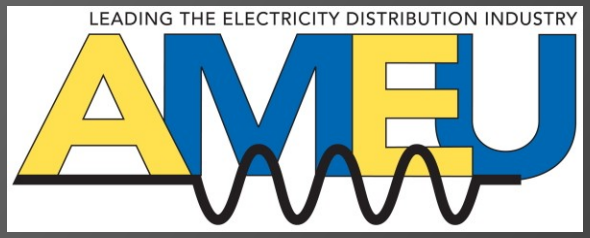


PROVISION OF BULK INFRASTRUCTURE BY DEVELOPERS: A MODEL THAT WORKS

Robert Zietsman - Geopower

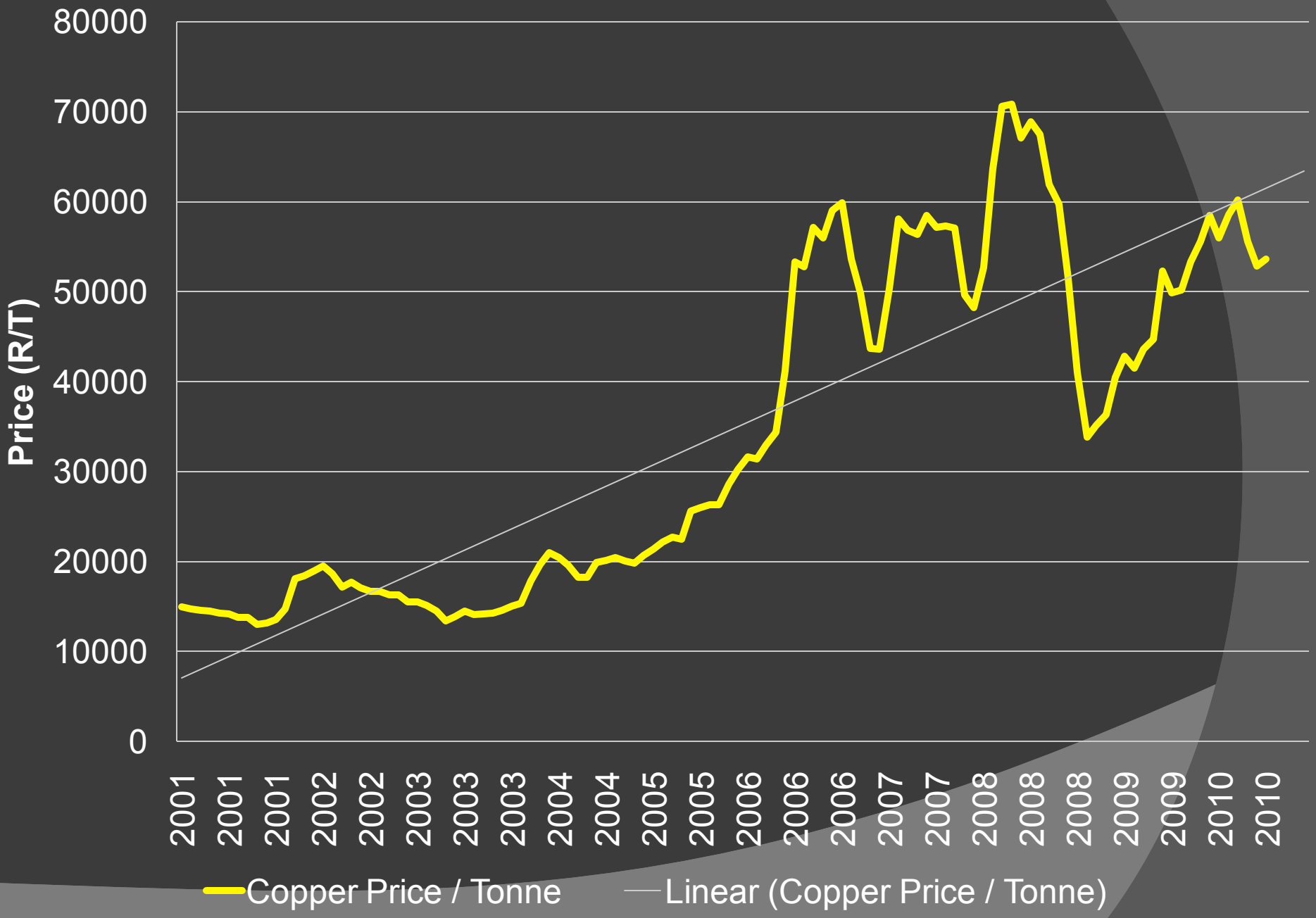
Introduction

- Growth in demand over the past decade exceeded network capacity;
- Fortunately for municipalities the public focus was on Eskom's load shedding;
- This enabled municipalities to address their infrastructure backlogs;
- In some instances developers were obliged to provide infrastructure;
- Private funding of primary infrastructure was rare and no model existed.

Bulk electricity infrastructure

- In the context of a municipality, comprises of the following shared external services:
  - HV in-feed stations
  - Primary distribution lines
  - Primary switching stations
  - Primary substations
  - Secondary switching substations
  - Secondary main feeder cable sets

Figure 1 : Trend in copper price



Infrastructure development

- Infrastructure is developed according to an approved IDP;
- Implementation is based on guidelines of a development master plan;
- Municipalities are influenced by politics, “zones of choice”;
- In many cases the emphasis is on providing infrastructure for previously disadvantaged communities.

Private funded infrastructure

- Privately funded infrastructure is necessitated when:
  - the infrastructure is required to be expedited in advance of the IDP;
  - a development is situated outside the urban edge;
  - a mutual agreement is concluded by the municipality & developer;
  - the municipality lacks the necessary funds to provide the infrastructure.

Service contributions

- Is the once-off, pro-rata contribution made by a developer towards the capital cost of shared bulk infrastructure for new developments;
- Based on the standard R/kVA tariff as promulgated in terms of the Systems Act 2000;
- Consistent with network standards as provided in Annex B of NRS 069;
- Some service contribution tariffs were inadequate in the past.

Figure 2 : Tend in service contribution tariffs

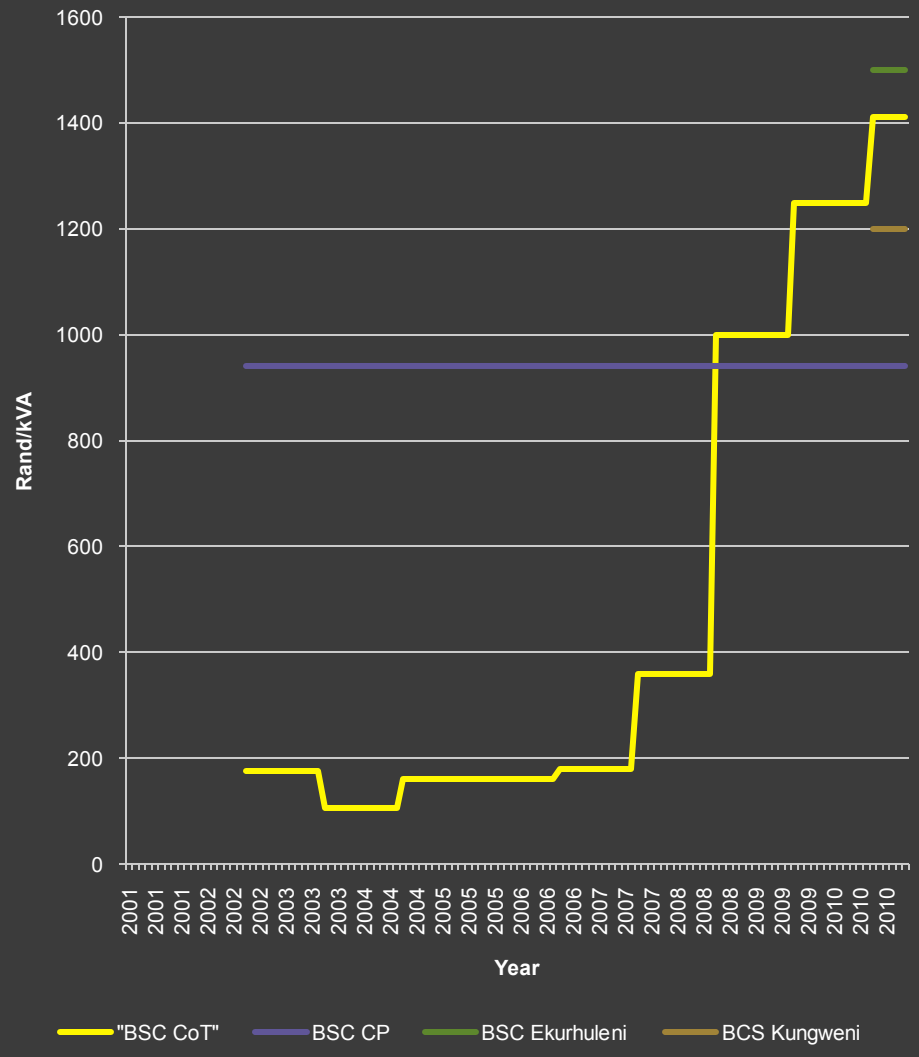
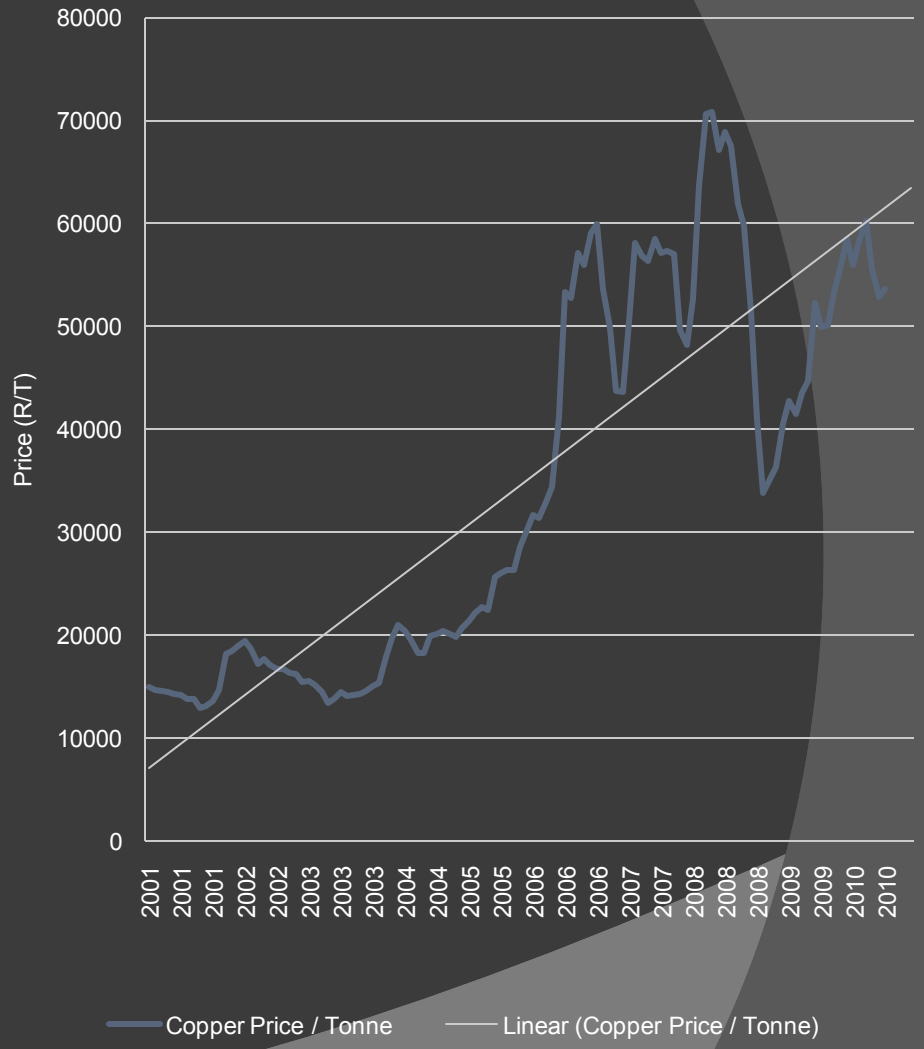


Figure 1 : Trend in copper price



Financial models

- Private funding of secondary networks is fairly common and the costs are offset against service contributions;
- It is seldom that the cost of secondary networks exceed the service contribution;
- Primary infrastructure is substantially more expensive;
- A special funding model is required.

Financial models

- Capital contribution rebate model
- Capital contribution offset model
- Capital contribution loan model

Capital contribution rebate

- Conventional method adopted by municipalities for mainly secondary works;
- Developer provides the infrastructure and is refunded by the municipality;
- Model proposed in NRS 069;
- Not practical for primary infrastructure.

Capital contribution offset

- Proven model for compensating a developer for primary infrastructure;
- The developer is allocated a fixed capacity, normally restricted to 2/3 of the station capacity at zero contribution;
- The municipality provides the two power transformers;
- No refund or interest;
- The developer has the benefit of increases in the contribution tariff.

Capital contribution loan

- Developer acts as a Bank or Financial Institution by lending the funds for the works to the municipality;
- The developer does not become involved in the execution of the works;
- The municipality allocates the required capacity to the developer;
- The loan is repaid in accordance with the terms and conditions thereof.

Model	Rebate model	Offset model	Loan model
Capacity allocation	kVA zoning ADMD standard	Fixed capacity (2/3 of station)	kVA zoning ADMD standard
Service contributions	Normal	Waivered	Normal
Scope of works	Determined by municipality	Determined by capacity	Determined by municipality
Expend – Developer	Cost of works	Cost of works, excl. transformers	Cost of works, less Mun exp
Expend – Municipality	None	Transformers	Available funds
Source of capital	Developer	Developer	Developer/Mun
Contribution tariffs	Actual	Date of agreem.	Actual
Refund/repayment	Surplus	None	Loan
Interest	Applicable	Not applicable	Applicable

Points to consider

- A capacity expiry period should be specified, typically 10 years;
- Capacity created by a developer must not be exclusive to that developer;
- Capacity must be allocated in accordance with the network standard;
- Land should be excluded from agreement;

Concl. & Recommendations

- Policy for levying service contributions to be consistent with SANS 204-1 and NRS 069;
- Advisable to amend policy to incorporate provision of primary infrastructure;
- Service contribution tariffs need to be consistent with actual costs;
- Provision of primary infrastructure by developers to be the exception not the rule.

Concl. & Recommendations

- An agreement must be concluded between both parties in advance;
- The land cost to be excluded;
- Council procurement process to be adopted in case of refunds;