

**GETTING IT RIGHT.
PRACTICAL SOLUTIONS TO STREETLIGHT MAINTENANCE**

BY



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The principal of a managed contract as an alternative approach to streetlight maintenance in the light of the impending restructuring of the EDI.

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Introduction:

P.M.C.E. [Formerly Niewalt (Jhb) Inc] currently control the entire Streetlight Maintenance Network on behalf of Benoni & Germiston Customer Care Centres, as '**Management Consultants**' on behalf of (Ekurhuleni Metro) and have been engaged in this process for the past 6 years.

To achieve the level of Service Delivery, Project Control and Management Skill that P.M.C.E. are currently able to provide for projects of this nature, has taken many years to accomplish. It must be stressed, however, that this approach was not developed independently, but rather in close communication and co-operation with many of the Engineering staff of Ekurhuleni.

The system presently in operation has been both tried and tested extensively, even to the extent that, Ekurhuleni Metro staff published an article, in the March 02 Issue of AMEU News, outlining the benefits achieved. These included **reduced** material usage, complaints received & overall maintenance costs. The improved service delivery has been acknowledged as a positive element for the Metro both by Engineering staff and Councillors alike.

P.M.C.E. has developed an extremely comprehensive Software Package specifically for the control and implementation of S/L Maintenance. This programme is capable of providing a broad spectrum of information including actual network details, cost analysis of every fault, dates when works orders were both issued and completed, materials utilised, contractor implementing repairs etc.,. The extent of information provided is invaluable and far surpasses that available to any other Municipality or Metro in S A today.

The information resulting from the application of this programme provides sufficient detailed statistics, to enable the controlling structure to consider alternatives with regard to the need to rationalise methods and materials utilised on any Network. This rationalisation has successfully been applied to lamps, fittings & poles.

During the past 5/6 years certain elements of the work implemented by P.M.C.E. on streetlight maintenance have stood out as being critical to the success of our management approach. These can best be defined as:

- a) After Dark Surveys on a regular cycle,
- b) Quality control of Materials supplied,
- c) Constant Availability of Materials,
- d) Dating of all replacement items for follow-up purposes,
- e) Use of SMME Contractors and confirmed Job Creation measures,
- f) Contractors only paid for work successfully completed,
- g) Strict control of Works Orders – No duplication,
- h) Inspection of completed work,
- i) Reconciliation of all materials used.

This management process as, implemented by P.M.C.E., has proved to be extremely effective in the arena of JOB creation. The evidence of this can be substantiated by the Benoni experience.

The following slides will provide a more detailed analysis of the various services included, within a comprehensive Managed Contract Process. The system however remains sufficiently flexible to allow for any specific requirements, or changes needed, to comply with an individual Metro/Council's wishes.

Implementation:

Disclosure: Specific/detailed information disclosed within this Paper has been provided with the approval and kind permission of Ekurhuleni Metro.

P.M.C.E.
Project Managers - Consulting Engineers

Practical Solutions
for
Streetlight
Maintenance



Practical Streetlight
Maintenance

Through the
Managed Contract Route

Direct Contracting Route

Council → Control → Contractor

Disadvantages:

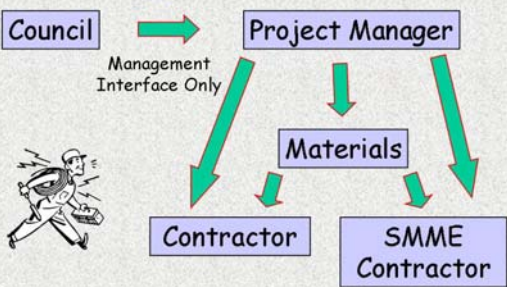
- High demands on Council internal management
- No dedicated SL management structure
- Open to manipulation by contractors
- Substandard workmanship
- Substandard materials

↑
Costs

Managed Contract Route

Council → Management Interface Only → Project Manager

Project Manager → Materials → Contractor and SMME Contractor



Managed Contract Route

Advantages:

- Dedicated management team for streetlighting
- Reduced input by council
- Contractors fully controlled by PM
- Fixed monthly fee - no incentives to raise costs, reduce work standard or use substandard materials



Costs

P.M.C.E's Role as Project Managers

- Preparation of Detailed Contract Documents for Tenders by Contractors
- Adjudication of Tenders Received
- Preparation of Specifications for Materials
- Complete Control of Materials - (contracts are for labour only)
- Financial Administration of Contracts

P.M.C.E's Role as Project Managers -Cont

- Implementation of After Dark Surveys for pro-active fault identification
- Collate fault reports and survey results and issue work orders to contractors on a daily basis
- Supervision and control of completed work
- Monitor Contractors performance - All faults attended within 96 hours (4days) or as required.
- Prepare Monthly Reports including budget control and material reconciliation

Scope of Work

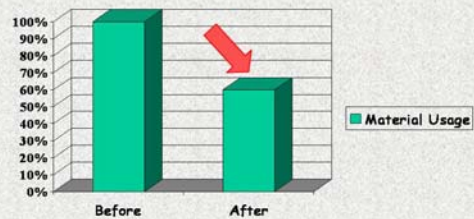


- Maintenance of **ALL** public lighting including:
 - » Streetlighting
 - » High mast lighting
 - » Public lighting in parks etc
- Repair of damage, accidental or malicious
- Replacement of lamps
- Repair/ replacement of fittings
- Repair/ replacement of poles
- Repair of cable faults

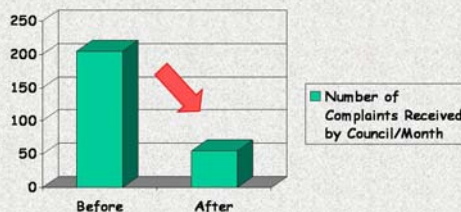
System Availability



Material Usage (Benoni CCC)



Complaints Received (Benoni CCC)



Additional Services

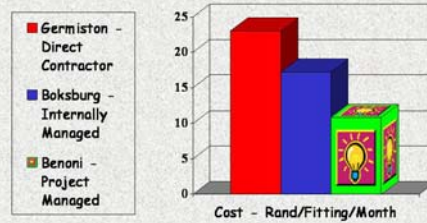
- Initial survey of network to establish fitting quantities and network condition (r/fencing)
- Advice on material standards
- Design of new installations
- Bulk lamp replacements
- Advice on upgrading of obsolete technology
- Advice on energy saving possibilities/solutions



Critical Success Aspects

- After dark surveys
- Material controls (stores)
 - Quality control of materials supplied
 - Availability of materials for installation
 - Dating of equipment for follow-up of failures with suppliers
- Financial controls
 - Contractors only paid for work done
 - Strict control of fault sheets - no duplication
 - Inspection of work done
 - Reconciliation of materials

Comparative Maintenance Costs (2001/2002 Financial Year)



SMME Development

- Streetlight maintenance is ideal for emerging contractors - materials are 'free issued' and equipment requirements are low.



Job Creation

The number of jobs involved on Benoni's street-lighting maintenance has increased as follows:

Employment Type	Before	After
Full Time	6	14
Part Time	0	9
Total	6	23

Funding for Refurbishment

(Fact) An ongoing program of capital refurbishment is necessary



Possible Sources of Funding

- Municipality
- External i.e. Eskom DSM
- P.M.C.E.

Summary

- Only company in SA with a track record
- Honesty and professionalism part of our work ethic, members of SAACE and IESSA
- Fixed P/M fee
- Responsibility with Accountability
- Job creation and skills transfer (Empowerment)
- Quality control - Systems already in place

Guaranteed Price Option

- We are sufficiently confident of our abilities to manage costs and maintain your system to the highest standards
- Therefore based on our extensive previous experience we can provide an alternative i.e.

Fixed guaranteed total price offer



Conclusion:

A number of Municipalities are currently considering an alternative approach to S/L Maintenance along with other Non-Core functions, particularly in light of the impending restructuring of the Supply Authorities and establishment of the REDS.

The above outlines an approach, based on a 'Managed Contract' with a 6 year proven track record, which was developed jointly between existing Municipal Engineering staff and an external Consulting Practice.

**P.M.C.E.
OCTOBER 2004**