

Botany Bay
Canterbury
Hurstville
Kogarah
Marrickville
Randwick
Rockdale
South Sydney
Suburban Shire
Waverley
Woolollahra



S S R O C

southern sydney regional
organisation of councils

200/2/88 02/160

3 July 2002

Mr Michael Seery
Program Manager
Independent Pricing and Regulatory Tribunal
Level 2, 44 Market Street
SYDNEY NSW 2000

Dear Michael

Re: Review of Metrology Procedures

I am writing in response to your recent invitation to comment on the current 'Review of Metrology Procedures' that IPART is undertaking. We welcome this opportunity to provide input, particularly with reference to aspects of the Metrology Procedure that relate to street lighting (Type 7 metering installations).

Seventeen Councils from central and southern Sydney have recently undertaken a review of their street lighting. Together, these Councils represent about 42% of the street lights in EnergyAustralia's network and almost a quarter of the street lights in NSW.

This review covered a wide range of regulatory, contractual, technical and standards issues. During the review a number of specific issues related to the Metrology Procedure were identified that may present opportunities for improvement. These issues are detailed below:

I. Inappropriate Sample Testing in Metrology Procedure

The Metrology Procedure requires the Responsible Person to validate the Inventory Table in accordance with the procedures in Schedule 13 – Metering Installation Type 7 – Sample Testing. The procedure outlined is based on sampling a randomly selected geographic area.

As currently constructed, the sampling approach does not appear to actually demonstrate that the 2% accuracy target it sets out is achieved. The current approach gives rise to a number of possible failure modes:

- there may be entries for lights that do not exist (eg, ones that have been removed or are simply erroneous entries);

Suite 4C, Hurstville House
34 MacMahon Street
Hurstville

PO Box 536
Hurstville NSW 1481

Ph: 02 9330 6455
Fv: 02 9330 6456

- there may be entries for lights from another jurisdiction that have accidentally found their way into the inventory table (eg, through data corruption, human error or boundary changes that have not been properly addressed); and
- there may be duplicate entries for the same light but with different ID numbers and/or different versions of the location description.

If such entries exist in a customer's inventory table, they may never be picked up by the geographic sampling approach of Schedule 13. Indeed, with that approach and because of the difficulties presented by the type of geographic location information provided (see below) one would need to audit the entire geographic area of a customer and then see what additional entries were left over to resolve the type of errors identified above.

One specific example of the types of problems described above is illustrated in Sutherland Shire's inventory table. This appears to contain some 238 entries with no geographic location identified. It was therefore impossible to verify that these fixtures existed as part of our recent review. Furthermore, it appears that the geographic audit would not identify such spurious entries.

2. Inappropriate / Inadequate Geographic Location Information

The geographic information about street lights in the inventory tables created by EnergyAustralia makes resolution of customer queries about the data extremely challenging to resolve. The data are not sequential (eg the lights along a given street do not usually have sequential ID numbers) nor can they be readily sorted to find all the entries on a given street or in a given area.

This difficulty arises because the approach used by EnergyAustralia to locate lights is a descriptive one (see table of examples below). In practice, the nature of the descriptions requires human interpretation to locate and sort.

TABLE: Sample Geographic Location Information from Marrickville Council's Inventory Table

GEO SMITH PLAYGROUND BISHOPGATE ST
LANDS LNE CNR PROBERT ST
CHELMSFORD ST 30N TURTLE LNE
TURTLE LNE OPP OXFORD LNE
NW CNR KINGSTON RD & ROWLEY
BAIN PK,CNR LINCOLN & SALISBURY,STAN
CNR SALISBURY RD & DENISON ST

With such an approach to location information it is often difficult to distinguish between multiple fixtures within a small area (eg, at an intersection) and more broadly, resolution of the problems with the sampling methodology identified above is challenging.

Provision of GPS information would seem to be an appropriate way to resolve all of the issues identified above. GPS data would readily highlight any deficiencies with the data by facilitating both sorting and mapping. It would have the added

benefits of facilitating better fault handling and maintenance planning by the DNSP. Collection of GPS information could be easily conducted as part of the next bulk lamp replacement program.

3. Insufficient Equipment Type Identification

When conducting an audit from the ground, it is not always possible to readily identify what type of device is installed (eg, lamp type and wattage). For customers or third parties attempting to independently survey lighting, this can present difficulties. Labelling of fixtures may be appropriate for the 20% of lights that are not of the three most common fixture types.

4. Provision of Audit Information

It is unclear from the Metrology Procedure how, when, or if councils will receive copies of the audits described in Schedule 13. Provision of such information to customers would seem to be an essential step in creating an efficient market. As such, it should be a requirement of the Metrology Procedure.

5. Energised Date "Manifestly Incorrect"

Based on the survey work conducted as part of the review, the energised dates shown on the inventory tables provided by EnergyAustralia appear to be largely incorrect.

EnergyAustralia confirmed in its submission to the 1998 IPART inquiry on street lighting that the underlying basis for the energised date, the "asset register for street lights is manifestly incorrect"¹.

It is difficult to estimate the average age of all components from a ground-based survey. However, many of the installations in Sydney appear to be well into the latter half of their useful lives (typically some 20 years).

Provision of accurate information about the age of assets should be a requirement of the Metrology Procedure and related documents. Indeed, without such information it is not possible for customers to make informed investment decisions in asset replacement programs.

6. Missing Entry in Public Lighting Load Table

Closely related to the Metrology Procedure and Inventory Table is the Public Lighting Load Table which establishes the consumption of each fixture type for purposes of system management by NEMMCO and for billing purposes. Acceptance of the Public Lighting Load Table by a council is required as a pre-condition for transferring to an alternative energy supplier.

Notably, there appears to be a missing entry for the most common lamp type. That lamp is the TF2*18 which constitutes 54.1% of total lamps across the council areas participating in the street lighting review. There may be up to 125,000 such fixtures in EnergyAustralia's network.

¹ EnergyAustralia submission to IPART "Pricing of Street Lighting Services 1998/99", July 1998, p 25

These lights were originally installed with 20W lamps but all appear to now be fitted with 18W lamps. This has been the case for some years but the Public Lighting Load Table does not provide an appropriate entry for such fixtures.

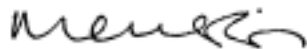
Based on manufacturer's data for ballast losses, the actual consumption of such fixtures may be 43.2W. The nearest entry in the Public Lighting Load Table is that for a TF2*20 at 50W. This entry is about 15.7% higher than appropriate.

7. Need for Periodic Review of Public Lighting Load Table

It is important to note that lighting loads are not static. Standards and technology are continuously changing, even for existing lighting types. For example, the Federal Government's planned introduction of Minimum Energy Performance Standards (MEPS) for ballasts from 1 February 2003 will result in more efficient ballasts for many types of lights in common usage. Periodic review of all entries in the Public Lighting Load Table may therefore be warranted.

We hope that the issues raised in this submission provide useful input to your current review process and we would be pleased to answer any questions you have related to the matters raised in this letter.

Yours sincerely



Melissa Gibbs
Executive Director

cc: Public Works Director:
- Ashfield Council
- Botany Bay City Council
- Burwood Council
- Canada Bay City Council
- Canterbury City Council
- Hurstville City Council
- Kogarah Council
- Lane Cove Council
- Leichhardt Council
- Marrickville Council
- Randwick City Council
- Rockdale City Council
- South Sydney City Council
- Strathfield Council
- Sutherland Shire Council
- Waverley Council
- Woollahra Council
Mr Graham Mawer – Next Energy