

Policy # 4110 - Street Lighting

Date Issued: November 1998
Reviewed: January 2014

BACKGROUND

As a result of central government funding policies the street lighting network in the Far North district is provided predominantly to improve traffic safety. A smaller number of lights have been installed for public safety reasons or to light up a community asset such as a footpath, toilet or playground. These lights are sometimes connected to the street lighting network.

Top Energy Networks [TEN] is the Far North district's Electricity Network Operator and they own and operate the electricity network (lines, poles, cables, etc) that supplies electricity to the street lighting network.

Where the power is supplied to the street lighting network from a direct connection to the TEN either wired overhead or via a network cable, this is called a pilot supply and is owned and maintained by the TEN. When a dedicated underground cable supplies power from a transformer to the street lighting network, this cable and all ripple switching circuits to the ripple switch, are owned and maintained by Council.

There is currently evidence of double dipping by TEN in that Council is charged a daily energy delivery fee for each light that should include the cost of maintaining the installed lines.

Under a separate management agreement, Top Energy Maintenance maintain Council's street lighting network. While Top Energy Maintenance provides to Top Energy Networks a large proportion of the lines maintenance services, it is likely that Council could successfully request competitive tenders for the streetlight maintenance services in future.

Council's street lighting network consists of either brackets and lanterns attached to Top Energy's utility poles or stand alone lighting columns and lanterns owned directly by the Council. The network is based on old and relatively inefficient technology with high power usage and maintenance needs.

Council's street lighting assets were in many cases developed over many years, and were not installed as a direct result of AS/NZS 1158 (or its predecessor NZS6701). This has resulted in a variety of lighting outputs, many of which are not sufficiently bright or uniform to achieve compliance to modern design standards. In other areas, land developers were permitted to install "decorative" lanterns, or those which produce area based lighting and an unacceptable amount of upward illumination or spill now known as light pollution. These lantern types tend to cost far more per item to install, and in some cases, do not meet Council's life expectancy before requiring maintenance or replacement.

As lighting technology changes it provides the Council with the opportunity to replace the street lighting network with more energy efficient products at an affordable cost. New lighting technology means much lower power consumption can be achieved, while providing the same or improved lighting performance. It also has environmental benefits such as reduced CO₂ emissions and light pollution.

It is intended that the use of this technology will reduce the Council's future energy usage as well as minimising ongoing operational and maintenance costs. Council is taking advantage of this new technology as it plans the up-grade or replacement of the network and by ensuring developers provide new street lights to agreed specifications.

The street lighting network power usage is a significant cost to the ratepayer. Additionally a high portion of the cost is for line charges, paid via the energy supplier, to TEN. To secure

the lowest power price the Council must regularly test the power retail market and use its bulk purchasing powers to best effect.

New Zealand Transport Agency [NZTA] own and manage the street lighting network along state highways.

Definitions:

- a] Street Lighting -
These lights are over a carriageway and necessary to identify traffic hazards.
- b] Flag Lighting
This is overhead lighting at intersections and are necessary to identify vehicle movements to other road users.
- c] Amenity Lighting -
This is lighting that does not meet the criteria of a] and b] above e.g. necessary for security purposes or pedestrian safety such as Paihia waterfront. This lighting does not attract any NZTA subsidy .

Funding:

New Zealand Transport Agency [NZTA] provides funding assistance to Council for:

1. Lighting improvements where there is clear evidence that a traffic safety issue exists that would be mitigated by lighting. This type of lighting is defined as street or flag lighting.
2. The replacement of carriageway lighting including the poles and lanterns at the end of their life.
3. Maintenance and power charges for street lighting.

NZTA funding terms and conditions are subject to change and. Refer to the NZTA current funding policy [redacted]

OBJECTIVE [the result we want to achieve]

The lighting network design provides an appropriate level of traffic and pedestrian safety and is energy efficient with the lowest practical life cycle cost and impact on the environment.

POLICY STATEMENTS [how we act in specific circumstances]

1. The Council will set a standard specification for new street lighting developments in the Far North District Council Engineering Standards and Guidelines [to be read in conjunction with NZS 4404:2004 Land Development and Subdivision Engineering and the requirements of AS/NZS: 1158 series].
2. The Council will ensure that lighting design will blend in with adjacent road. lighting, complement the neighbourhood character and, as far as is reasonably practicable, minimise the impact on the neighbouring properties and environment with regard to aesthetics, glare and spill light
3. Street lights that vest in the Council as part of any subdivision shall be activated once 25% of new sections created have occupied dwellings.
4. The Council will ensure maintenance is carried out in the most efficient means by clustering faults by location into work streams.
5. The Council will seek best value for the ratepayer for the maintenance of the street lighting.
6. The Council will develop a program for replacement of lighting with new efficient technology to reduce the Council's future energy usage as well as minimising

ongoing operational and maintenance costs. The replacement program will include progressive replacement of existing decorative lights installed by developers to a standard light of high energy efficiency.

7. The Council will seek best value for the ratepayer in terms of electricity prices by regularly testing the power retail market.
8. The Council shall determine the allocation of funds for new lighting construction, as part of its Long Term Plan development.
9. Non NZTA subsidised lights shall be funded from the community rate and prioritised by the relevant Community Board. These lights shall not be connected to the carriageway street lighting network and must have a separate metered power supply to also be funded from the community rate.
10. Requests for new lights will be considered and prioritised annually within approved LTP budgets.
11. New lights will be prioritised by taking into consideration the following factors:
 - a. Traffic safety;
 - b. Completion of existing network or linkages to new development;
 - c. Pedestrian density and safety i.e. location of schools, hospitals, old peoples' homes, kindergarten and playcentres, high use walkways, town centres;
 - d. Traffic density i.e. arterial, collector, local, through road, no exit or cul de sac;
 - e. Traffic Speed i.e. lack of speed restrictions;
 - f. Public safety concerns including consideration of Crime Prevention Through Environmental Design [CPTED] principles;
 - g. Ministry for the Environment's Urban Design Protocol.

Procedures:

To be developed by management and to include:

1. Vesting
2. Light activation
3. Maintenance