

# Harnessing Efficiencies in New Zealand's Road Lighting Landscape

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# Road lighting snapshot

**340,000** road lights in New Zealand

**150 GWh\*** in electrical energy

**20,880** tonnes of CO<sub>2</sub>

\*Based on percentage share of electricity consumption for local government administration from EECA energy datasets 2007 to 2012

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# Counting the costs



Road lighting costs **\$55 million\*** annually

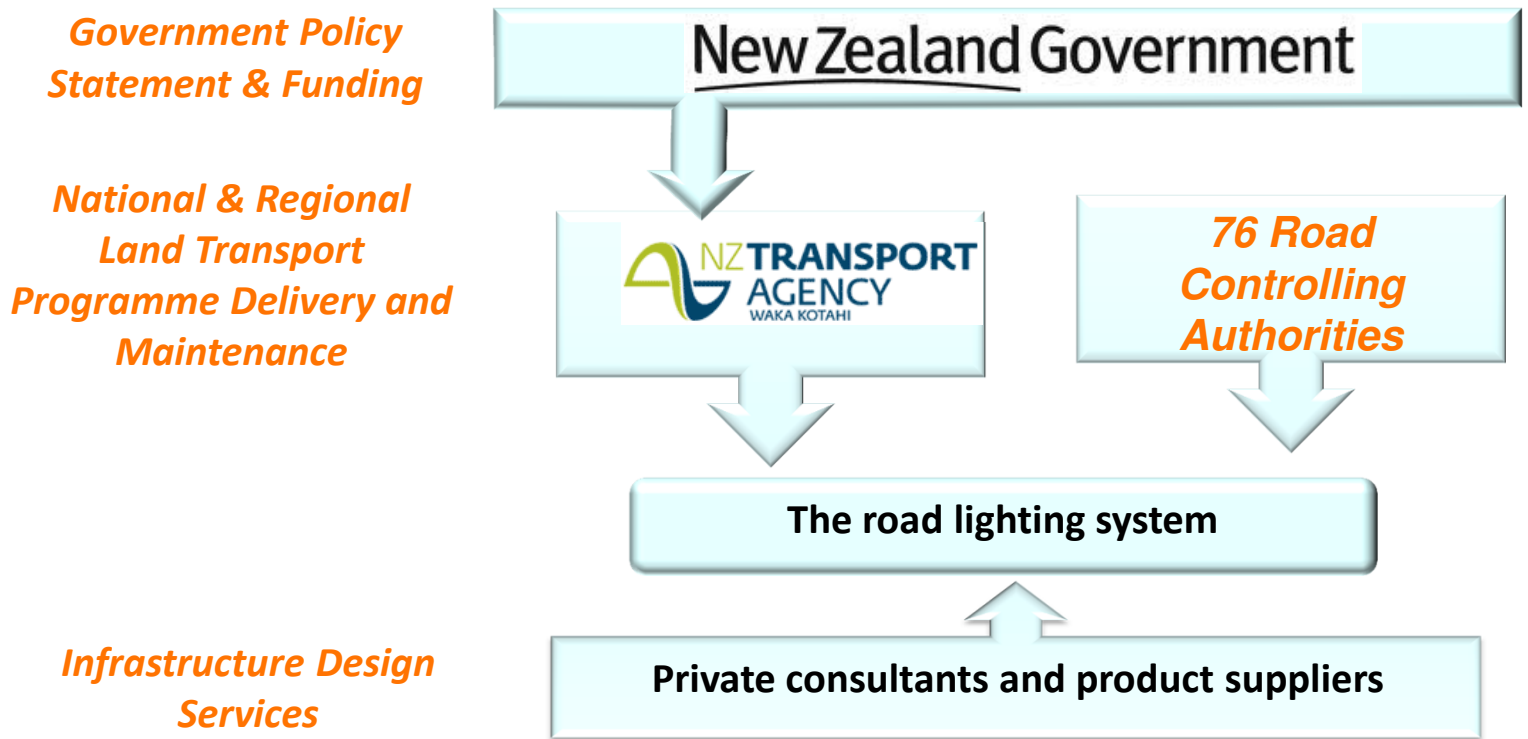
Energy consumption accounts for **35%** or \$19 million with the remaining **65%** or \$36 million in repairs and maintenance costs

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# Background



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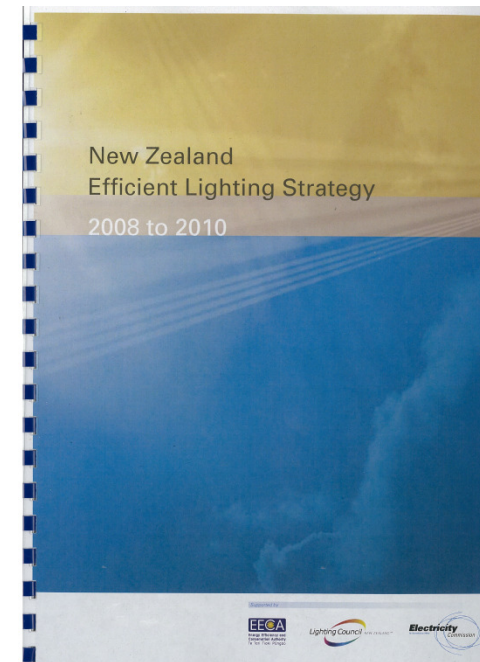
# Challenges in the Past

- Poor access to reliable information on road lighting options and technologies.
- Split incentives between developers and Councils.
- Procurement/regulatory policies.
- The challenges of existing infrastructure.
- Funding/access to capital – with a particular focus on up-front capital cost.
- Stockpiles of low-efficiency mercury vapour lamps
- Tariff structures & un-metered road lighting.

# The New Zealand Efficient Lighting Strategy 2008 - 2010

## Overarching Principle

To strengthen naturally occurring market delivered efficiency through interventions that remove barriers to technology and economically viable efficient lighting opportunities.



# Some of the changes

Key stakeholder interaction and active participation in standards development

Road Lighting Calculators and selection tools were developed and posted to the RightLight website

Minimum Energy Performance Standards (MEPS) were developed for CFL Lamps and voluntary Standards for luminaires and LED's

NZTA policy shift from "Lowest First" costs to "Best Value"

Rapid development of Solid State Lighting continues

Interest in private sector funding of new and renewed infrastructure

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# Today's Challenges

## Road Lighting Standards

- ASNZS1158 not in sync with current technology
- ASNZS1158 Has limitations – guidance only
- No obligation or incentive for roading authorities to act.

## Road Controlling Authority Fragmentation

- 76 RCA's – each acting independently and in isolation.
- Lighting assets at different operational and maintenance cycles.
- Unrealistic expectations placed on Authorities with already overburdened resources, to understand the complexities of efficient road lighting design.

## Design Cohesion

- Large variations in lighting products
- Variations in colour temperature
- Varying degrees of visual discomfort and glare



# Key Takeaways

LED Technology has arrived and is proven. But do we have the most effective administrative structure in place for delivery?

Could National Guidelines provide the clarity RCA's need to make informed decisions?

Is the Road Lighting Industry up for developing priorities to help NZ move forward?

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# Thank you



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