



How Australian cities can reduce their carbon footprint using LEDs

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ILLUMINATING IDEAS

Lighting accounts for 20% of electricity consumption worldwide.



Converting to LEDs could cut that consumption in half.

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Global Demand for Artificial Light:

projected to be **80%** higher by **2030**



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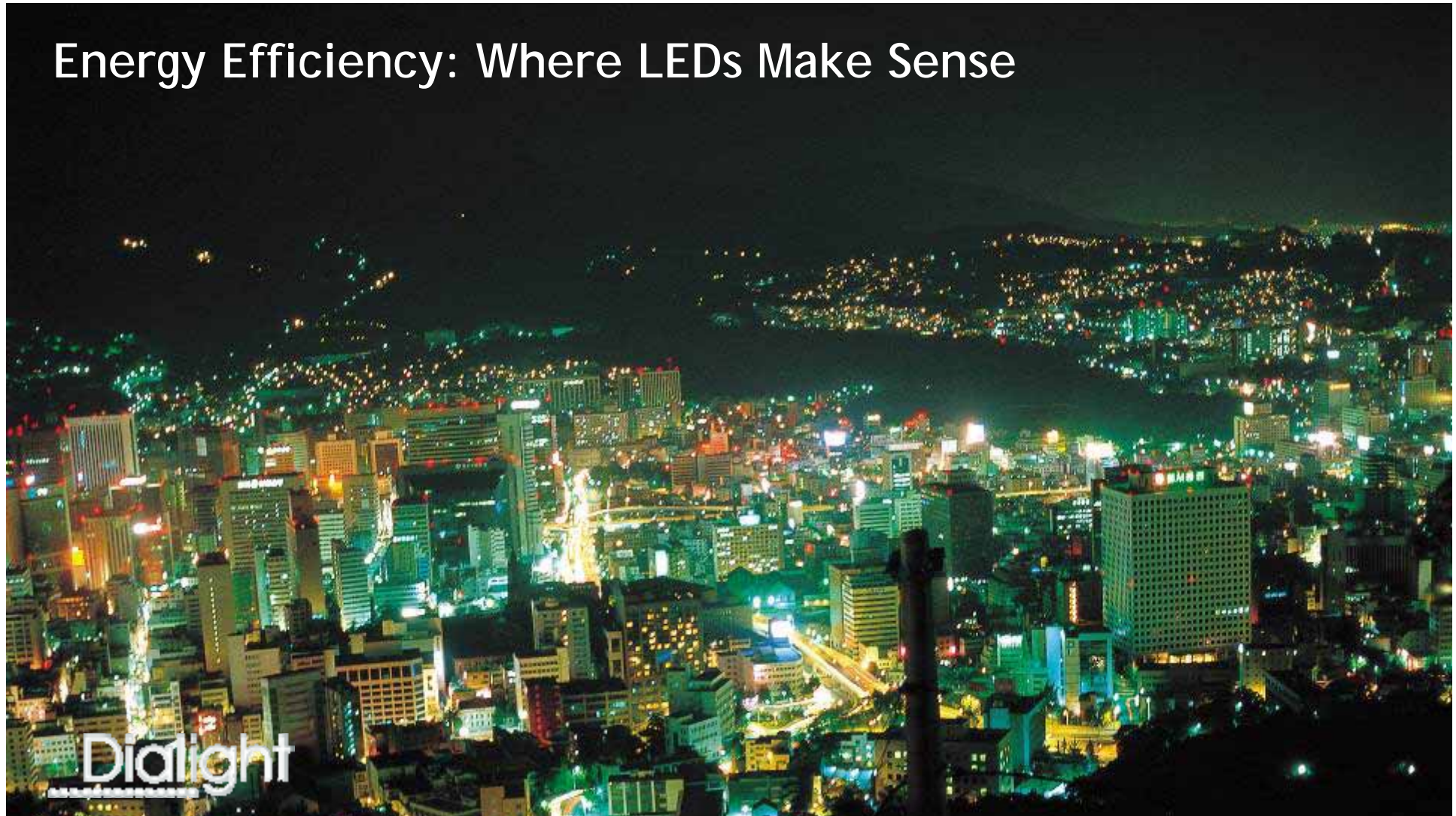
- United Nations Environmental Program (UNEP) September 2009

What's so different about LED lighting??

- Energy Savings (60-90% in many applications)
- Maintenance Savings
- No Hazardous Materials
- Directional Light
- Instant On-Off

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Energy Efficiency: Where LEDs Make Sense





Australia LED Traffic Signals

350 million kWh saved

\$35 million

300,000 tons of CO₂

(Savings per Year)

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Miami Florida Traffic Signals

25 million kWh saved

\$2.5 million

74,000 tons of CO₂

(Savings per Year)

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ILLUMINATION SOLUTIONS

Australia Street Lighting (2006)

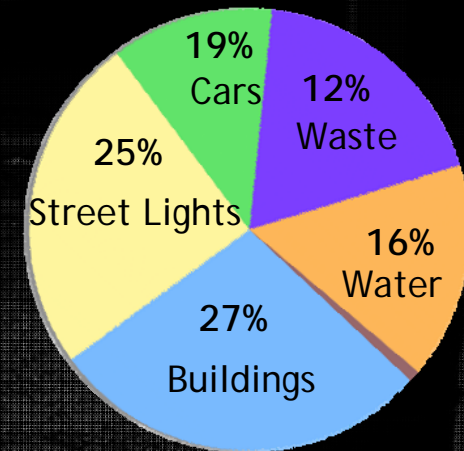
1.94 million street lights

1 million+ kWh of Electricity Consumed

\$210 million

1.15 million tons of CO₂
(per year)

Greenhouse Gas Emissions



ICLEI Sustainable Lighting Definition

LED Lighting

Meet local community needs (safety, aesthetics, etc)



Minimise Energy Use and Greenhouse Gas Emissions



Adhere to Australian Lighting Standards



Reduce Toxicity to the Environment (Mercury)



Reduce Stray Light and 'Light Pollution'



International Council for Local Environmental Initiatives (2006)

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Australia LED Street Lighting

510 million kWh saved

\$51 million

472,000 tons of CO₂

(Savings per Year)

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San Diego California Street Lights

50 million kWh saved

\$6 million

40,000 tons of CO₂

(Savings per Year)

Orange Line
to
Gillespie Field
via
Downtown
San Diego

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New York City Rail Road Signals

40,000 Signal Retrofit

Canal
Street

4 million kWh saved

\$1 million

11,000 tons of CO₂

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Valero Refinery Paulsboro, New Jersey

(1% Retrofit)



Dialight LED Lighting

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60% Energy Savings

30% Fewer Fixtures

\$5,000

180 tons of CO₂

(Savings per Year)



High Pressure Sodium



North America
Largest Commercial Retailer

LED High Bay Lighting

2.3 million kWh saved

\$230,000

2,000 tons of CO₂

(Savings per Year)

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What's Next:

LED Lighting Smart Technology

- ◆ 100% Lumen Maintenance
- ◆ Smart Grid Ready
- ◆ Remote Monitoring
- ◆ LifeSaver Thermal Control
- ◆ Remote Controlling
 - ◆ Energy Consumption
 - ◆ Occupancy



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Thank You

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