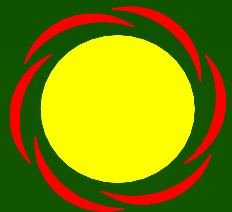


Street Lighting: A Visible Sign of Commitment to Sustainable Electricity Use

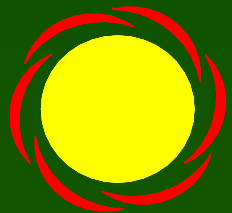
- NZSSES Conference December 2008
- Presenter:
- Roger Loveless



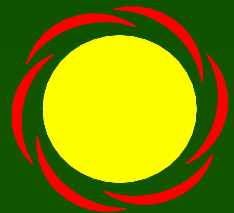
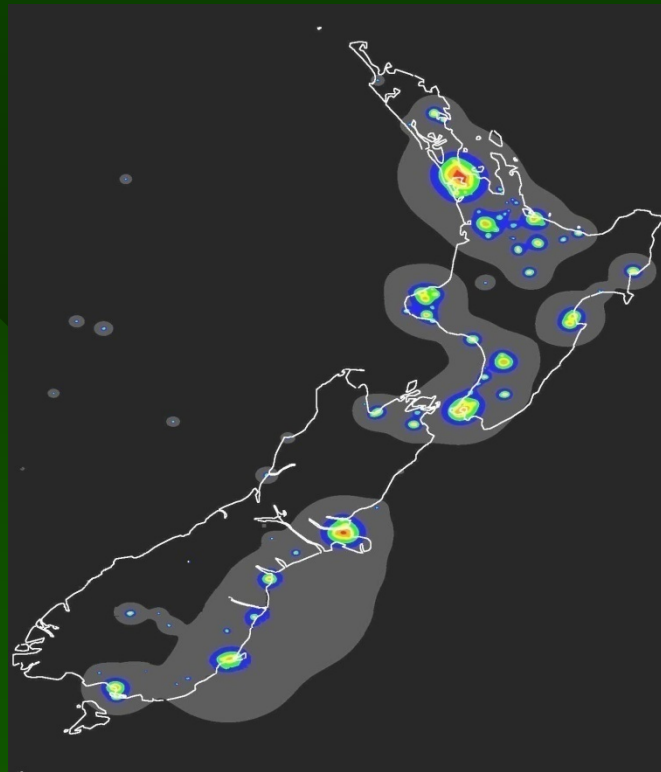
Internationally: 15 GW, 60 TWhr
36 million t CO₂ eq



Two views, from The Blue Beauty, pictures taken by Sunita Williams (NASA)

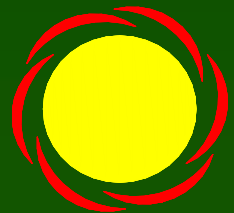


NZ 35 MW, 150GWhr, 90,000 t CO² eq



The New Paradigm

- Manage for Sustainability.
- Waste not want not.
- Energy Efficiency: - In everything!
- Every journey begins with the first step.
- Lets get started!



Potential Savings. (Street Lights)

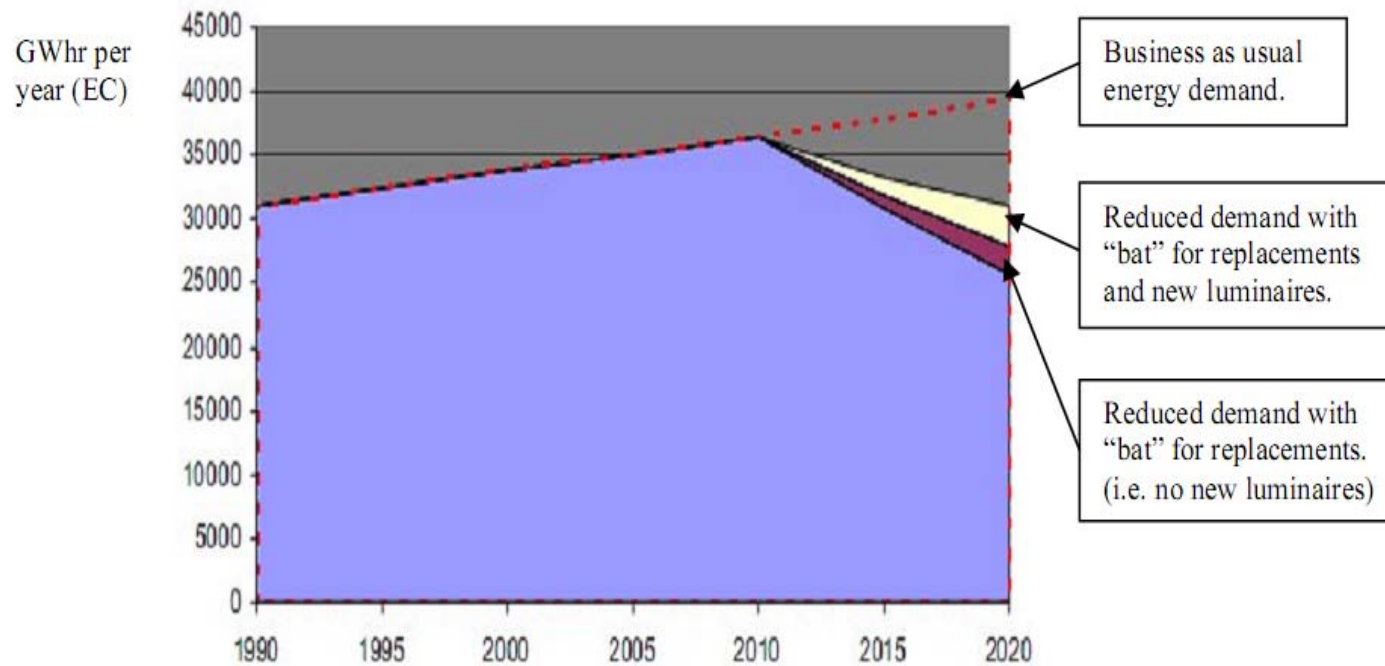
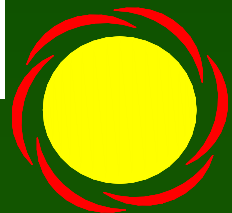
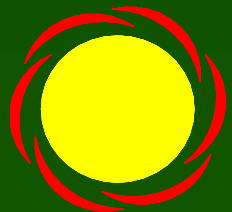


Figure 1: Annual electricity use in the EC of old stock versus new luminaires since 2010.
(Figure 61, Van Tichelen et al, 2007. Scale is in GW hr per annum)



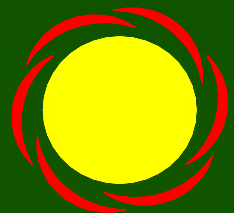
Misconceptions / barriers

- Costs will go up..... **Not** if managed well.
- Design is not standards compliant.....
Have you **asked** the stakeholders?
- Higher light levels are safer.....only in some circumstances.



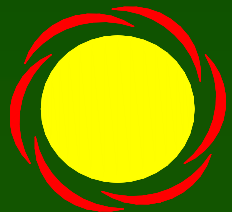
Energy Efficiency:

- To manage, first we need to measure performance.
- Then benchmark against requirements.
- Then improve energy efficiency.
- Deliver **only** what's needed, as **efficiently** as possible.



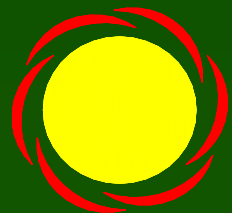
Soft Benefits: The QBL

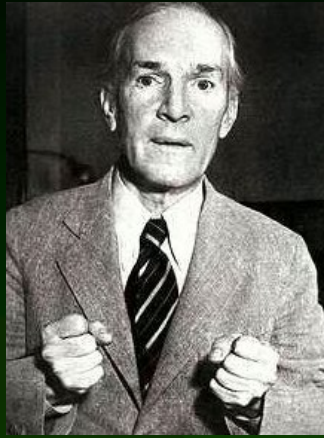
- Safer Walking and Cycling Environment
- Healthier Lifestyles
- Increased Public Transport Patronage
- Know Your Neighbors!!



Priorities for Energy Efficiency

- Only light what's needed, when needed, at correct performance level.
- Residential areas Where most lights are.
- Good design. Use correct mounting heights, IP66 luminaires suitable for the situation.
- Treat holistically, if vehicle speeds are a problem.... Use speed humps etc.
- Remove Institutional barriers.
- Allow innovation. Dimming and switching etc.





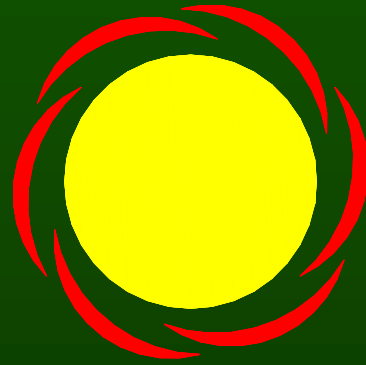
Our problem?

From www.climatecrisis.net
"An Inconvenient Truth"

It is ***DIFFICULT*** to get someone to understand something when his ***SALARY*** depends on his ***NOT UNDERSTANDING IT.***

Upton Sinclair





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