

# The Green Light

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The electrical hazards associated with traffic signals have been recognised for some time

- Early attempts at solving these on complete intersections implemented by the Welsh Office over ten years ago
- Hampered by use of traditional incandescent signals

Greater success has been achieved with pedestrian signals

- All new pedestrian signals are now ELV



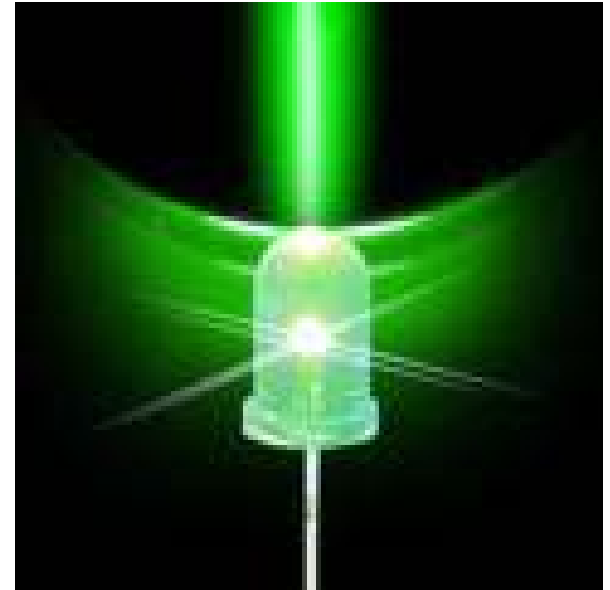
## Major advances in LED technology

- Very high light-output devices requiring little power

New lamp switching technology able to control signals with virtually no power loss

International standardisation

- CLC/TS 50509

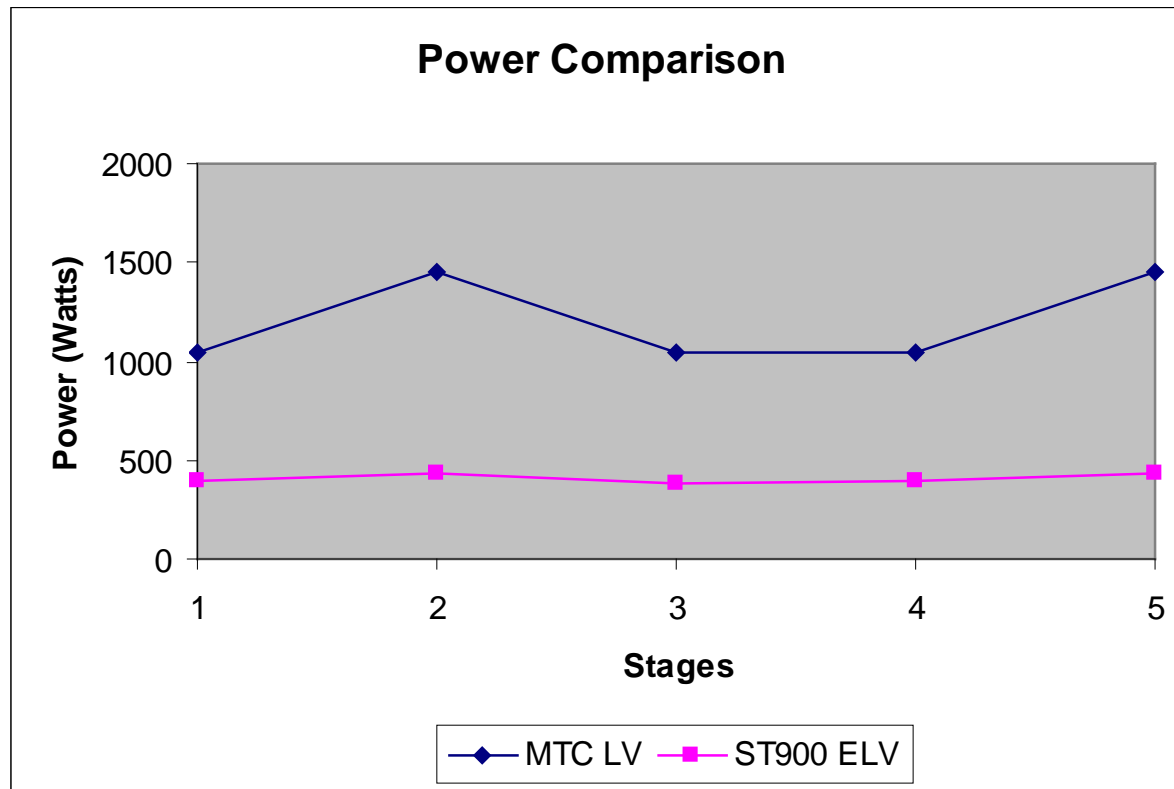


But.....

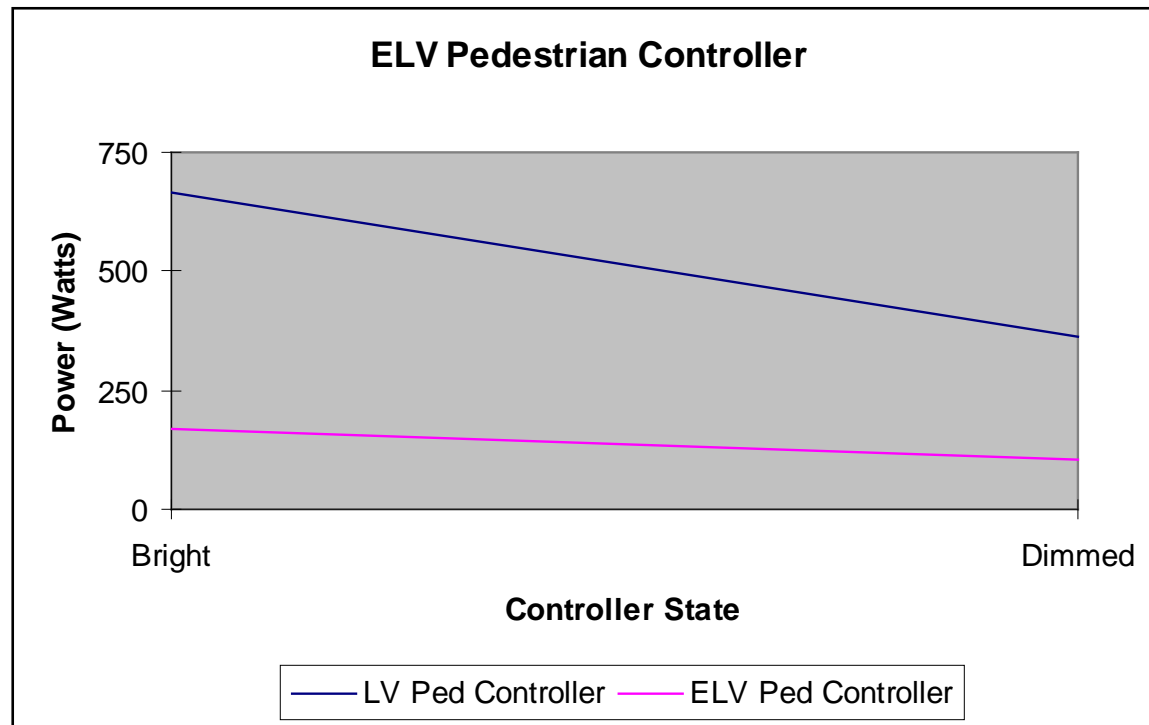
Will you see real benefits  
when using ELV traffic  
systems?



# Junction Controller



# Pedestrian (Puffin Controller)



# Increased electrical safety

For members of the public in the event of damage to the signal installation

For personnel working on or around the intersection

Also has the potential to reduce the use of ladders

- Pole terminations are possible at the pole base with no associated electric shock risk



# Reduced energy consumption

Latest generation ELV signals are very low power

- Offer up to 70% power saving over traditional signals
- Potential for considerable energy cost savings and reduction in carbon footprint





## Reduced installation costs

Can significantly reduce the number of street cables required

- No need to split LV and ELV into separate cables

ELV LED signals are lower cost than the equivalent LV LED versions



An ELV traffic solution requires more than just a controller

A full system approach is necessary!

- ELV controller
- ELV LED signal heads
- ELV LED box signs
- ELV nearside signals
- ELV LED wait indicators
- ELV solar cell

The trails undertaking in Newcastle have been covered in:

TEC (Traffic Engineering and Control) Magazine, September 2008 Vol. 49 No. 8 pp 302-303

Surveyor Magazine, 2 October 2008 pages 14 – 15 entitled - *Saving Energy in a Flash*

Surveyor Magazine, 15 January 2009 page 22 entitled- *Sending out the right Signal*

# In Summary

ELV sites typically

- Reduce annual power consumption by 65% to 70%
- Reduce precious raw materials, used for cables, by typically 30%

Are cheaper to install than traditional LED based solutions

Offer realistic overall payback times even compared to initially lower cost HI solutions

Are electrically much safer than non ELV installations

**Any Questions  
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Thank You