TIMEPAC Academy

Session 8

Re-Co and electrical lighting

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Introduction

- Lighting systems are **essential for creating a comfortable and safe environment** in any building

- Electrical lighting - **Connecting the operational settings** of a building's electrical lighting systems **with actual energy consumption** involves a process of monitoring, analysis, and optimization

- Re-commissioning - **testing the switching and dimming functions** of the lighting system, testing the lighting control system's **communication with the fixtures and devices**, and **verifying that the lighting performance** and quality meet the **design criteria and user requirements**

- Don't forget the **emergency lighting system**

Implementation approach (1/2)

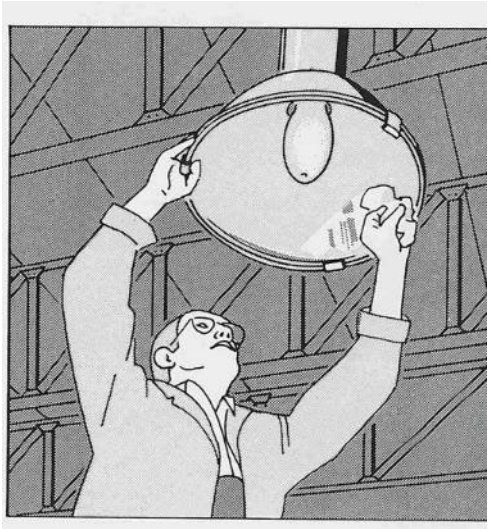
- Assessment of current performance - **collecting historical energy usage data to understand existing performance levels**
- Inspection of lighting systems and assessing current lighting levels against the originally **designed and relevant standards and national regulation**. Checking for uniformity and the absence of glare or shadow areas that could affect occupant productivity and comfort
- Verifying the **correct operation of lighting control systems**, including timers, occupancy sensors, daylight harvesting controls, and dimming systems
- Verifying that the **control systems are programmed according to the current occupancy patterns and daylight availability**

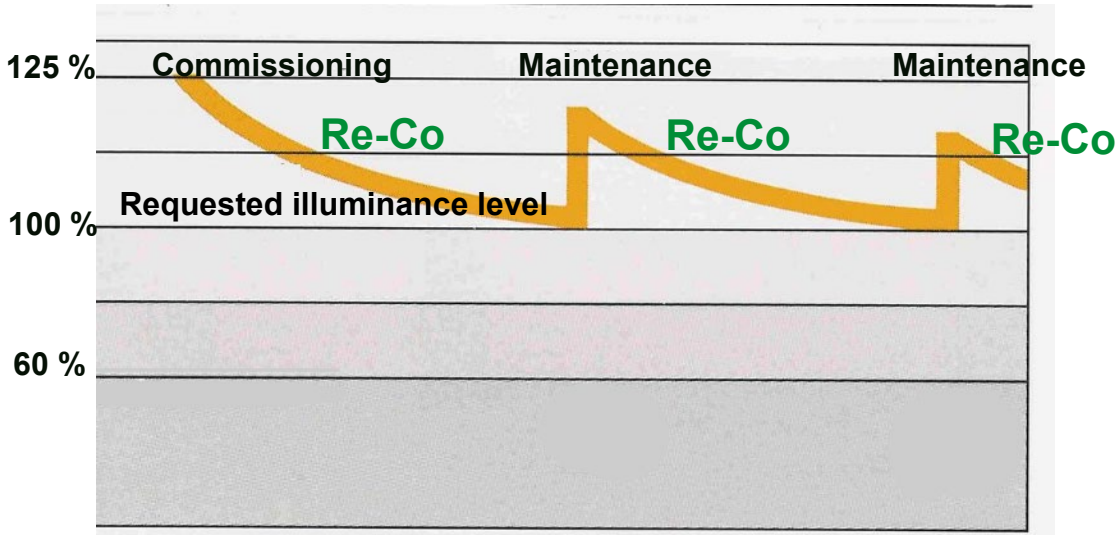
Implementation approach (2/2)

- Reviewing the **maintenance procedures** and checking the cleaning schedules for fixtures and sensors to ensure they function optimally
- Assessing if the **placement of fixtures is still appropriate** for the space as it is currently used
- Gathering **feedback from building occupants** about their satisfaction with the lighting quality, including issues like brightness, and the ability to control light levels in their personal spaces
- Checking how the **lighting system integrates with other building systems**
- Identifying **opportunities for energy savings** through the use of more efficient lamps, fixtures, or control strategies and **conducting a cost-benefit analysis**

Practical experiences (1/8)

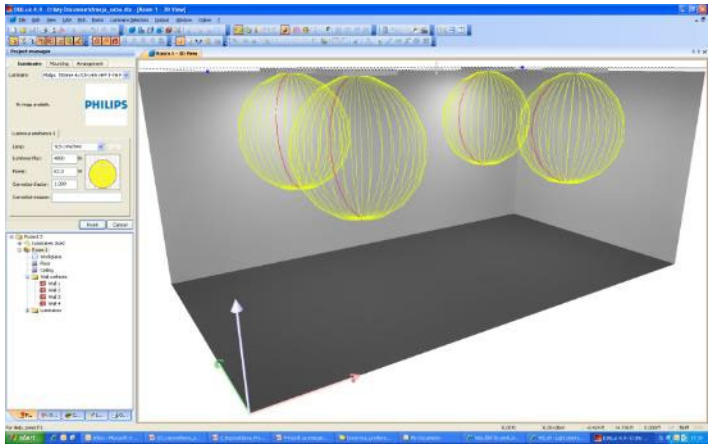
- Golden rule of Re-Co (electricity use in buildings): ‘**WHEN YOU DON'T NEED IT, TURN IT OFF**’

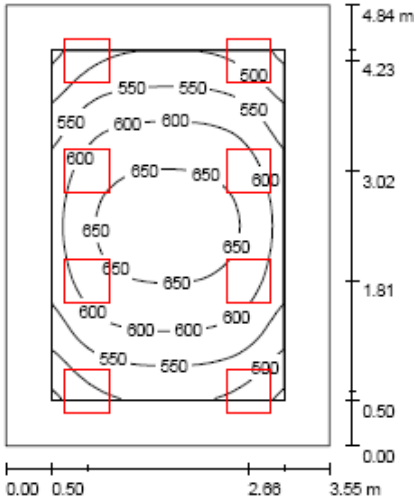




Practical experiences (2/8)

- Free software for lighting design:
  - https://www.trilux.com/en/
  - https://www.dial.de/en/home/
  - https://relux.com/en/





Practical experiences (3/8)

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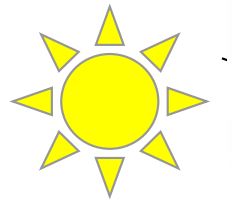


Practical experiences (4/8)

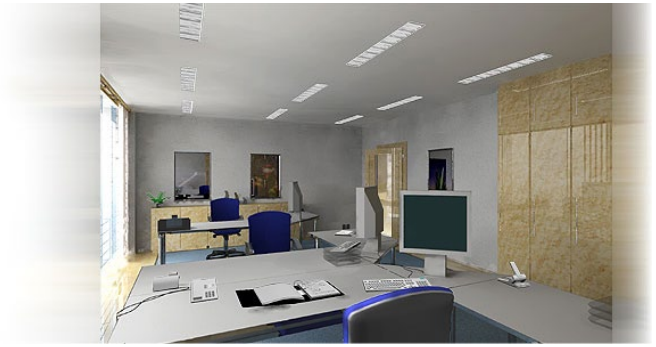
16:00

Practical experiences (5/8)

19:00

Practical experiences (6/8)

10:00



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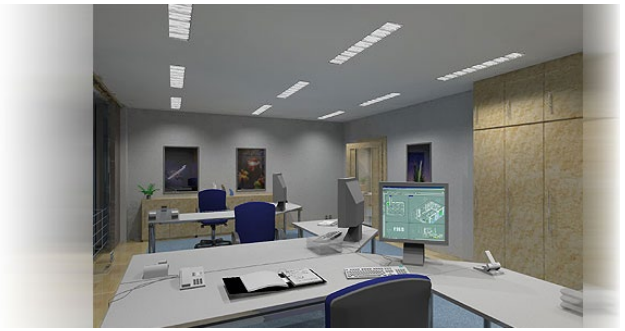
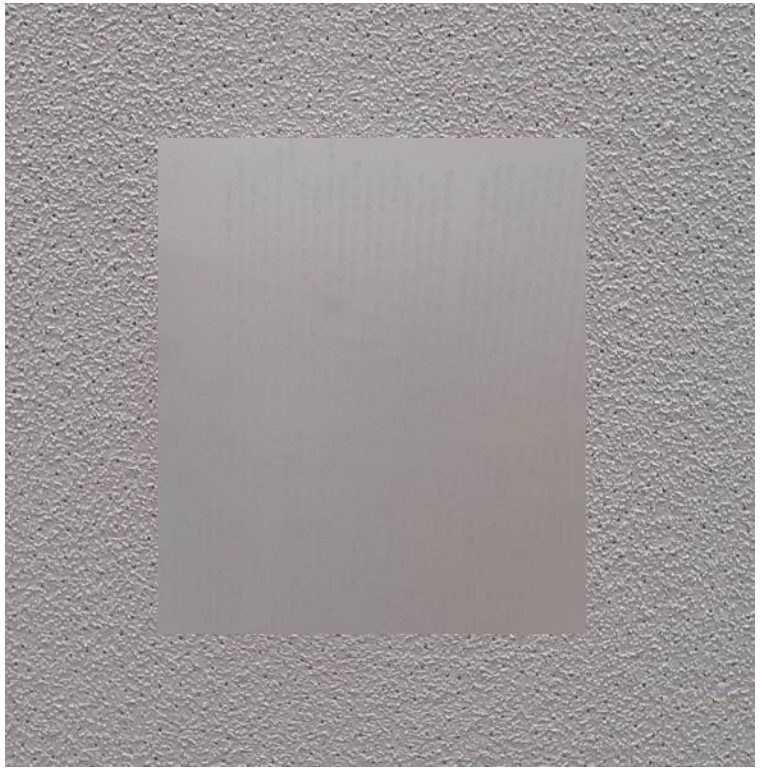
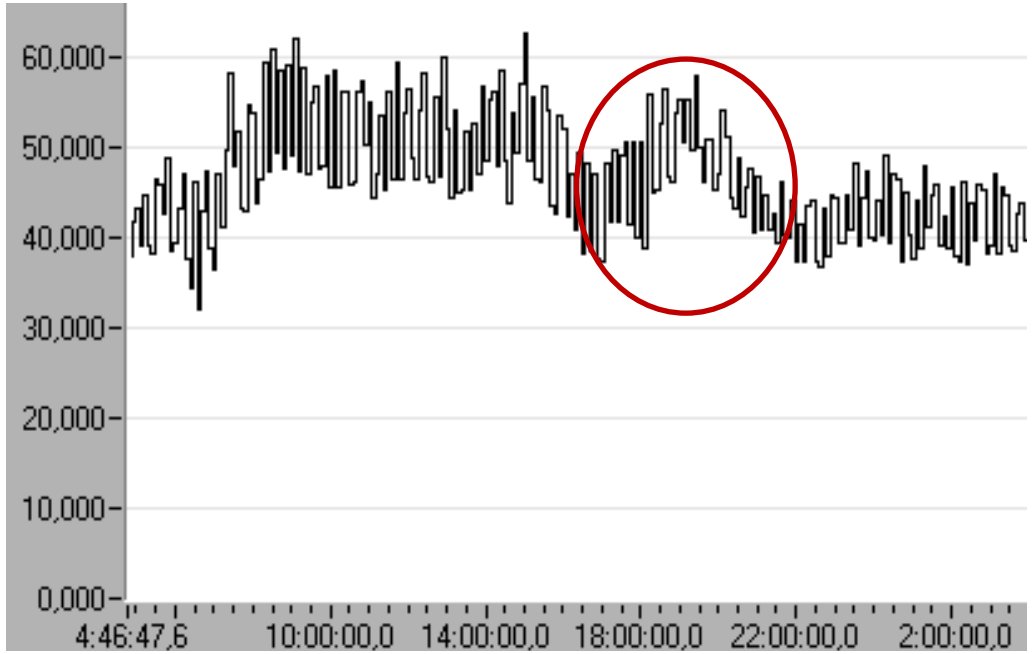
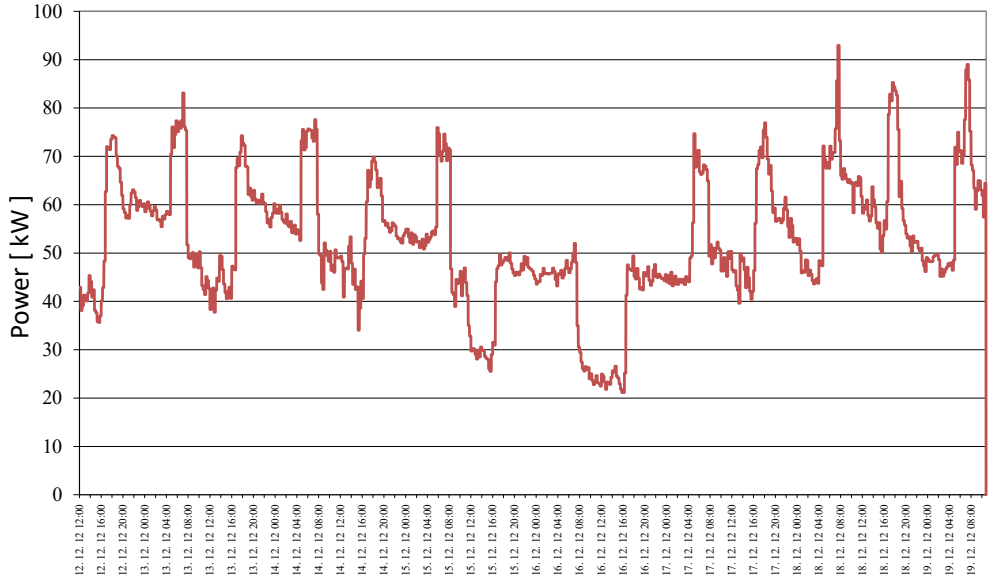


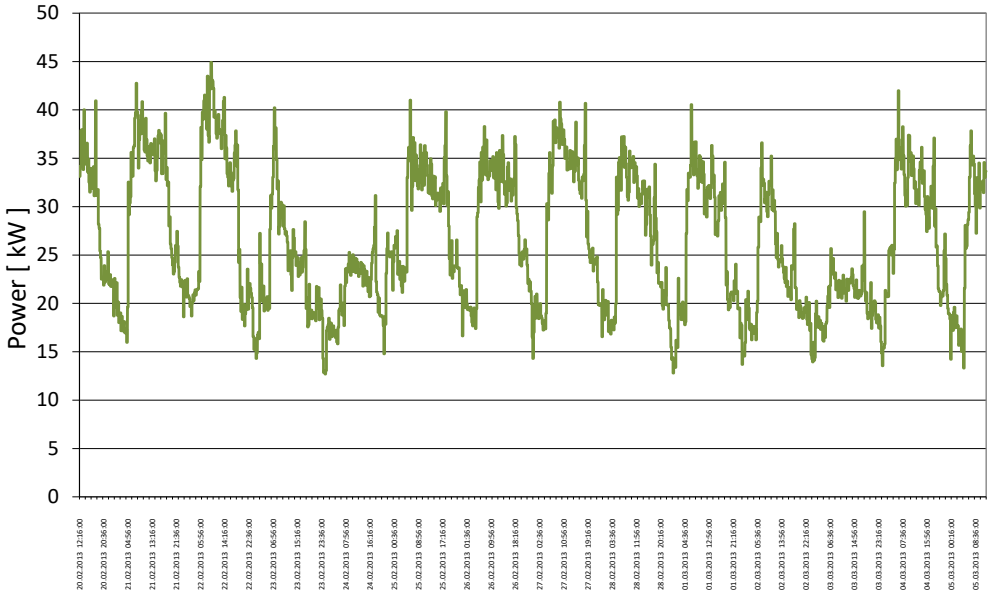
Practical experiences (7/8)



Practical experiences (8/8)







4% of energy savings triggered by Re-Co of a lighting system

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If you would like more information, please visit www.timepac.eu or contact us at

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Thanks for your attention!

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