$$\text{\% total annual outdoor lighting energy generation from PV} = \frac{\Sigma \text{ Annual energy generated from PV (kWh)}}{\Sigma \text{ (Installed lighting load (Wattage) x hours of operation) (kWh)}}$$

All outdoor lighting that will be operated between the hours of 6pm to 11pm must be considered within the calculation.

The percentage of total annual hot water energy consumption supplied through solar thermal system(s) is determined by calculating the annual energy generation of the solar thermal system(s), and dividing their sum by the annual hot water energy consumption.

$$\text{\% total annual hot water energy generated from solar thermal} = \frac{\Sigma \text{ Annual energy generated from solar thermal (kWh)}}{\text{Annual hot water energy consumption (kWh)}}$$

The annual hot water energy consumption must be calculated using an internationally recognised methodology such as those defined by CIBSE, ASHRAE or CIPHE.

References

- CIBSE (2014) *CIBSE Guide G Public Health and Plumbing Engineering*. London, UK.
- ANSI/ASHRAE/IES (2013) *ASHRAE Standard 90.1-2013 - Energy Standard for Buildings except Low-Rise Residential Buildings*. Atlanta, USA.
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