

# Ene06

## Energy efficient transportation systems

### Actions:

- i. Produce a lift/escalator **transportation demand report** and calculate energy consumption
- ii. Specify energy **efficient features**

### Energy consumption

For specified **lifts, escalators or moving walks** (transportation types):

- Analyse the transportation demand and usage patterns for the building to determine the **optimum number and size** of lifts, escalators or moving walks
- Calculate the **energy consumption** in accordance with BS EN ISO 25745 Part 2 or Part 3 for one of the following:
  - o At least **two options** for each transportation type (e.g. for lifts, hydraulic, traction or machine room-less (MRL)) OR
  - o At least **two options** considering different system arrangements and control strategies.
- Consider the use of **regenerative drives** where they will produce an energy saving greater than the additional standby energy used to support the drives. Regenerative drives will typically be appropriate for lifts with **high travel and high intensity** use.
- Specify the transportation system with the **lowest** energy consumption

### Energy efficient features

#### Lifts

Specify the following **three** energy efficient features for each lift:

- A standby condition for off-peak periods
- The lift car lighting and display lighting provides an average luminous efficacy across all fittings in the car of > 70 luminaire lumens per circuit Watt
- Use of a drive controller capable of variable speed, variable-voltage, and variable-frequency (VVVF) control of the drive motor.

Specify regenerative drives where their use is demonstrated to **save energy**.

#### Escalators/moving walks

Specify **at least one** of the following for each escalator or moving walk:

- A load-sensing device that synchronises motor output to passenger demand through a variable speed drive OR
- A passenger-sensing device for automated operation (auto walk), so the escalator operates in auto start mode when there is no passenger demand.

---

Note: This document is intended as guidance only. Consult your BREEAM AP or Assessor to ensure compliance is achieved.