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Press release
Dornbirn, June 2010

Power company saves energy
ASEAG Aachen points a new way

B1 I The new lighting solution with daylight-based control installed in the maintenance hangar of Verkehrsbetriebe Aachen has enormous energy saving potential. The amortisation period for the lighting system is only two years.

When you enter the maintenance hangar of Verkehrsbetriebe Aachen, you will be fascinated not only by the busses – your attention will automatically be directed towards the extremely bright and pleasant lighting. Thanks to the technology incorporated in the new lighting system, its operation is also extremely efficient.

„Whenever lots of daylight or sunlight enter the room, lots of energy are saved“, notes Rudi Aretz, Head of OE at Technical Building Management of the EVA power supply and transport facilities company. In the two large halls, the 280 busses owned by the Aachen ASEAG AG tramway and power company as well as some 150 guest busses are serviced. Among them is a model rarely seen on Germany's roads: „Längelulatsch“ („long-wheeler“), a 25-metre double-articulated bus. Here, maintenance and cleaning work is carried out 24 hours a day. Therefore, the lighting costs account for a large part of the company's annual energy costs. This was sufficient reason for Rudi Aretz and his team to start looking for alternatives. „We searched on the Internet, and talked with several installers. Eventually it was the overall concept provided by Frings that made us happy. The external daylight sensor by Zumtobel in particular, which accurately calculates the quantity of extra artificial light needed, was an important argument.

The former system had a total power requirement of 26,000 W and was run 18 hours a day, in spite of the fact that the two large maintenance sheds' extensive skylights provide optimum conditions for exploiting natural daylight.

In conformity with applicable standards, the workstations in the smaller hall are now illuminated with 550 to 600 lx, requiring no more than 18,000 W, thanks to new, efficient and

dimmable Scuba moisture-proof batten luminaires fitted with T5 lamps. Daylight intensity and the position of the sun are monitored by an external daylight sensor. As each individual Scuba luminaire is linked to the Luxmate Professional control system, they are dimmed or switched off automatically. Even on heavily overcast days, power requirements rarely exceed 12,000 W, while on sunny days, power requirements are reduced to as little as 5,000 W, which means a reduction by more than 60%. Not yet included in the calculations are the additional potential savings resulting from the use of presence detectors, each of which slowly dims, and then switches off completely, 3 to 4 luminaires whenever no-one is present in the respective area. In this way, the workers in the workshop are always provided with the light they need for doing their job, while savings potential is used to optimum extent. Even more impressive savings were achieved in the larger hall, where it has been possible to reduce total power requirements from 58,000 W to an average of 30,300 W. On sunny days, the central computer sometimes displays power requirements of 14,500 W – to Rudi Aretz's delight: „It was not possible to calculate potential savings with 100 percent accuracy before installation; we are excited that they are significantly higher than calculated. The amortisation period for the lighting system will be two years. That's sensational, for then we will save ready cash while helping to protect the environment."

The emergency lighting system was updated as well. The trunking now incorporates Resclite emergency luminaires fitted with high-performance LEDs. Thanks to maximum efficiency and perfect light distribution, a small number of luminaires is enough to provide emergency lighting even at great mounting heights. And yet the powerful LED package requires a minimum of energy. The luminaire's installed load is only 5 watts, in non-maintained mode even as little as 1.5 watts.
With its new lighting system, the power company has set an example of future-oriented building management, with an intelligent combination of daylight and artificial light that allows for huge potential savings while providing perfect lighting quality.

B2 I The Scuba moisture-proof luminaires installed are controlled efficiently via the Luxmate Professional lighting management system.

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Fact box

ASEAG Verkehrsbetriebe Aachen/D

Client:	ASEAG Verkehrsbetriebe Aachen/D
Electrical design:	Frings Elektrotechnik, Alsdorf/D
Electrical installation:	Frings Elektrotechnik, Alsdorf/D
Lighting solution:	Scuba moisture-proof batten luminaires, Luxmate Professional lighting management system, Resclite emergency luminaires

B3 I In the maintenance hangar's carwash facility, too, Scuba luminaires provide sufficient light.

More information:

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