

This magazine has been dutifully reporting on the rise of electric power over the last couple of decades, but it's only comparatively recently that stakeholders have been taking notice – and more importantly, acting. Stuttgart airport, though, is an exception to the rule, having nailed its green credentials to the mast a couple of decades ago. For the airport's recently-arrived MD, Dr Arina Freitag, this was an eye-opener.

"I've only been in the post a year or so," she relates, "but I was amazed by the depth of the sustainability programme here when I arrived."

Part of this is down to the government's keenness on environmentally friendly projects, although Stuttgart has been far-sighted enough to take its own green initiatives in this context. Aside from swelling numbers of battery-powered GSE (of the airport's vehicle fleet, about 45% is electric), the airport has become a front-runner in the green stakes by virtue of its running only electric buses. It now boasts 16 of the green COBUS passenger buses, a clear indication of its reduced carbon credentials.

The green supplier

The airport began looking at the greening of its bus fleet back in 2015. Like any responsible investor, it assessed what was on offer and considered hybrid and fuel cell possibilities, as well as electric. However, at that time, COBUS was the only supplier of a fully electric bus; or more precisely, it was the only supplier with a prototype on its books. As COBUS' Senior Sales Manager Peter Heuberger recalls, it represented a significant step for the manufacturer.

"This was, frankly, a big risk for us. The electric concept *had* to work: it was vital for both parties, since the airport had decided on an initial order. Our reputation was at stake and we couldn't afford to get it wrong." In fact, early discussions with the airport authority revolved around the purchase of a single example – it was only subsequently that a decision was taken to acquire six, a number that would lead to the accumulation of a useful amount of data.

The airport, until that time, had operated COBUS transport, albeit in diesel format. Moving to electric was a major jump; after all, it had to invest in the infrastructure to be able to accommodate the green plan. To this end, two new energy stations were constructed and dedicated charging points were installed for the expected arrivals.



Silent running

Stuttgart airport is leading the pack in Germany in terms of electric GSE, as the Editor finds out.

As Martin Hofmann, Project Manager of the airside electrification projects comments, when the vehicles arrived, there were initially a few minor teething troubles, but it quickly became clear that behind the scenes, the COBUS team had done its homework.

Acceptance on the ramp

Taking delivery of the buses was one thing – but how did the staff react? As it turned out, this was a very straightforward adoption.

According to Freitag, after a few months there was in-depth discussion about their use.

"Worker acceptance of the buses was high. Some staff were even coming in early so that they would be able to drive the electric buses instead of the diesel versions. The drivers appreciated the lower noise levels and the lack of vibration; and of course, emissions went down. Overall,

it was a positive move and, we feel, has even been influential in terms of staff recruitment."

She adds another intriguing comment, to the effect that the welcome absence of a fuel odour has been commented on by some of the drivers.

Given this kind of response, it will come as no surprise that the airport authority followed up this initial order, and duly replaced all its diesel-powered buses with electric versions.

Day-to-day use

Once the fleet was operating, then it became a question of ensuring that there were no hiccups with the charging procedures. A slight adjustment was required in the daily workflow to accommodate this; helpfully, the natural peaks and troughs in the day's activities allowed periods for charging. Heuberger states that a bus can be almost fully charged

within 90 minutes; and if a fast charge expedient is adopted, this can be brought down to half an hour. The li-ion batteries lend themselves to opportunistic charging, and the stable technology means that they suffer no ill effects from this. On his list now are revamped power chargers for the airport that will be multi-purpose.

It all sounds so simple and rather begs the question of why other stations haven't followed suit.

"Infrastructure," he says succinctly. "Many airports want to go down this route but just don't have the charging facilities." He adds that a COBUS engineer is on site for the purposes of maintenance but that the maintenance in this respect is not of the traditional kind. "With battery power, there are many fewer moving parts – our engineer will look after items that wear out, like brake pads, and deal with any minor damage that might occur on the ramp."

According to Heuberger, the batteries come with an eight-year warranty. By that time, they may be down to 80% of their original capacity but this isn't the end of the story, for the power source is modular, meaning that deficient cells can be replaced as required. The expense is thus less than might have first been anticipated.

And will the airport get to the 100% electric GSE level? Hofmann says not, simply because the airport still has a requirement for some diesel-powered transport,

particularly that utilised during the winter. "However, because it's seasonally operated, there is less pressure from an environmental perspective," he explains.

In closing

Given that the airport is still experiencing passenger growth (figures were up by 7% in 2018, and Freitag predicts perhaps another 2% in this year), would more buses be ordered? "At the moment we have an adequate number," she replies.

She does make an interesting comment, however, on the subject of passengers. "We get a lot of feedback every month from travellers through the airport," she reveals, "and one or two have commented favourably on the new buses."

Clean, green, quiet and low maintenance: as this magazine has had occasion to comment before, the future is electric – and going forward, the world needs a greater number of progressive airports like Stuttgart. **ghi**



COBUS

Leading technology. Pioneers from the beginning

We are global players in the field of airport mobility. Our motivation to lead the market through our expertise, advanced technologies and, after all, with great passion.



PERFORMANCE.
PURPOSE. PASSION.

COBUS Industries GmbH · Max-Planck-Ring 43 · 65205 Wiesbaden · Germany · +49(0)6122-95 53-0 · info@cobus-industries.de · www.cobus-industries.de