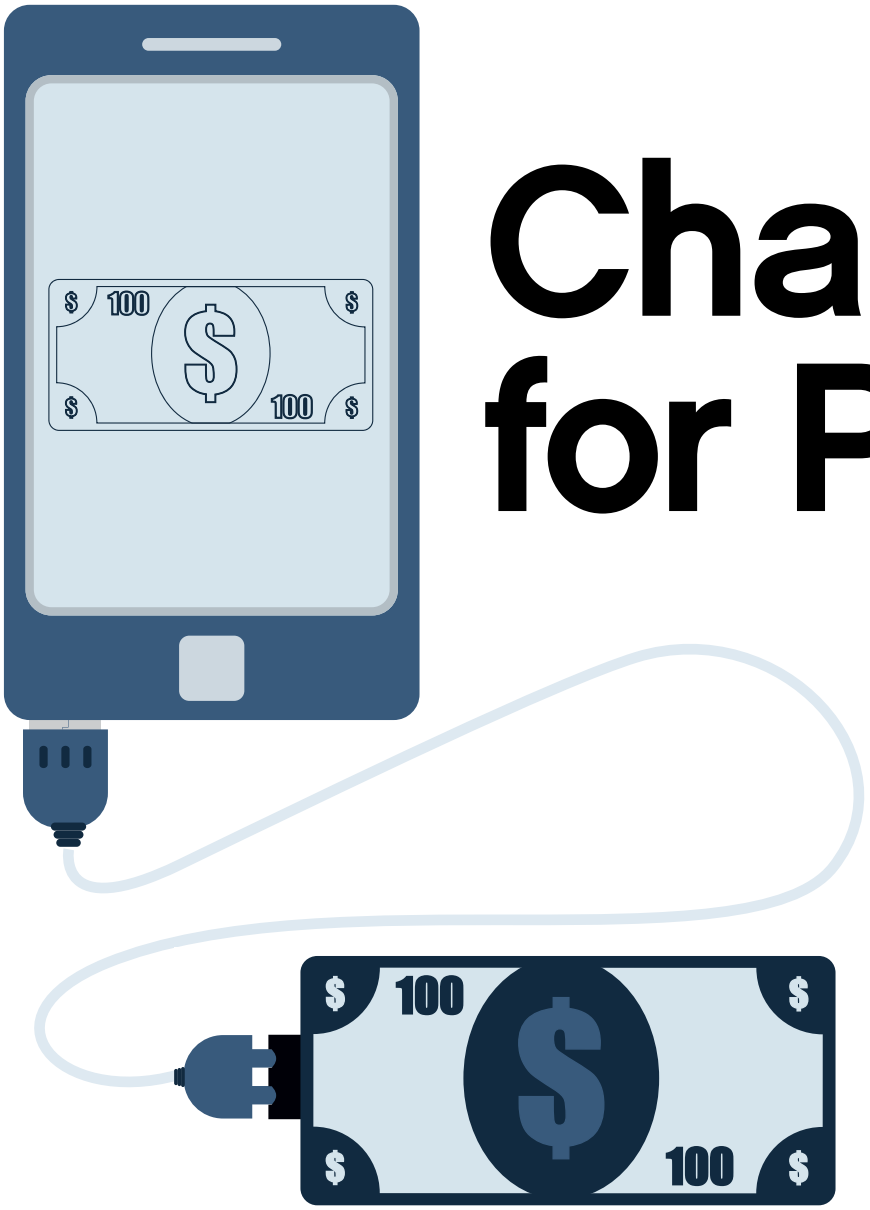


Charging for Power

Kathryn B. Creedy plugs into the debate over monetising in-seat power.

As airlines increasingly rely on passengers using their own personal electronic devices for in-flight entertainment, providing in-seat power will grow in importance – especially for those airlines that have not invested in embedded-IFE systems. Indeed, according to Routehappy, an online platform which helps passengers identify whether their aircraft has the amenities they require, not having in-seat power puts an airline at a significant competitive disadvantage.

Now a new debate is taking place that has the potential to further alienate passengers and that is whether airlines will monetise power ports by imposing new fees. Monetising would mean adding in-flight power supply to a host of other ancillary revenues which already net the world's airlines US$65 billion, according to the CarTrawler/Ideaworks Global Statistics of a la Carte Revenue 2018 report released in February.

The importance of in-seat power is reflected in the fact that most legacy carriers opt to equip all but their oldest aircraft at every seat, according to a quick review of long-haul economy on Seat Guru's list. In-seat power is much less prevalent on narrowbodies flying short-haul, except on legacies, on the presumption that it is not needed for short-haul flights. It is virtually nonexistent on regional aircraft for the same reason, according to the short-haul economy list. But installations are growing.

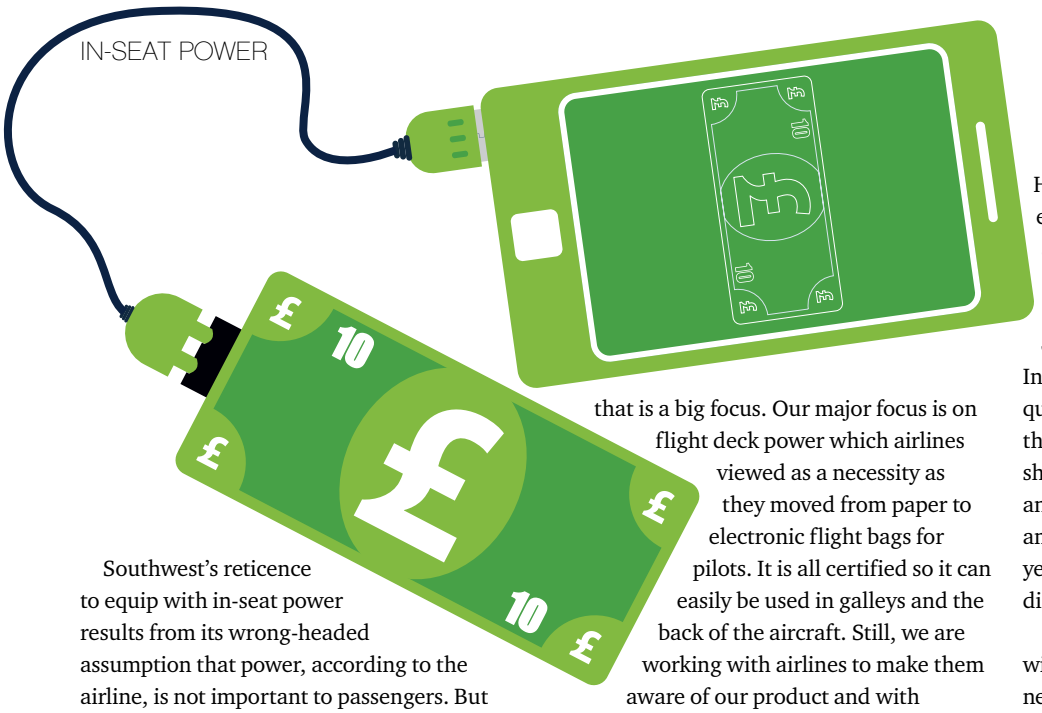
"Overall, about 35% of aircraft are to have an in-seat power system installed," Craig Foster, senior consultant and co-founder of Valour Consultancy, tells Inflight, giving us a sneak peek of a study he is about to publish. "However, there is huge variance between penetration in the single-aisle market and the twin-aisle market. The single-aisle market is considered largely untapped and a massive opportunity, especially as IFC/W-IFE equipage grows and with it, so-called battery anxiety from passengers."

FOMO SYNDROME

Astronics has unique insights into market penetration given its role as the supplier of the in-seat power portion for the major IFE suppliers and the fact it has over 260 airlines equipped with its EmPower in-seat power system.

"Our existing airline customers tell us that in-seat power is an expected and required amenity," Dennis Markert, director Business Development, Cabin Electronics for Astronics AES, says. "Almost all widebody aircraft are delivered with in-seat power, generally, as part of the IFE system. Within the past 24 months, we have seen a significant uptake in in-seat power adoption rates for narrowbody aircraft. With IFEC onboard, streaming IFE, passengers using their smartphones for everything from boarding passes to ordering food items, a fully charged device is paramount."

The president and co-founder of ExpertFlyer.com, Chris Lopinto, agrees. "A large percentage of US domestic fleets include in-seat power, with the exception of Southwest for some inexplicable reason," Lopinto explains. "As airlines move to bring-your-own-device in-flight entertainment, it will be expected that power will be provided for your devices. As such customers prefer USB power for their portable devices."



Southwest's reticence to equip with in-seat power results from its wrong-headed assumption that power, according to the airline, is not important to passengers. But Foster suggests this is about to change.

"I've a feeling Southwest may well adopt it in the not too distant future," he says.

Indeed, as the airline incorporates flights to Hawaii and extends its reach internationally, coupled with the fact it relies on PEDs for in-flight entertainment, including free streaming through its app, it will have no other choice, frankly.

"It seems most long-haul airlines will offer a mix of AC and DC power to all passengers," believes Tom Genovese, director of commercial airline sales for True Blue Power. "The low-cost, short-haul carriers tend to only offer USB, if they offer power at all. A typical USB installation is lower weight and cost compared to offering AC power at each seat. With the advancement of USB-C PD – producing up to 60 W of power, enough to power a laptop – there may be a shift to just offering USB at the seat since the output will be comparable to AC, but without the weight and higher cost. That is the wave of the future. It's compact, easy to use, people are already familiar with it and it takes up a lot less weight than the AC plug."

The converter Genovese references converts the same 300-800 Hz found in homes to 60 Hz. True Blue only makes the outlet but supplies much of the business aviation and VIP/head-of-state installations, such as the 787.

"True Blue Power started focusing on AC power solutions a decade ago for business and general aviation aircraft but over the past few years airlines have contacted us for our products," says Genovese. "We put together products for commercial airlines and now that is a big focus. Our major focus is on flight deck power which airlines viewed as a necessity as they moved from paper to electronic flight bags for pilots. It is all certified so it can easily be used in galleys and the back of the aircraft. Still, we are working with airlines to make them aware of our product and with engineering firms that do the certification work, creating a triangle between airline, engineering firm and us to come up with the proper solution for them."

The cost of deployment is not insignificant, according to Foster, who estimates a USB-seat-power system can cost up to $450 per seat, though new providers are offering systems for less than $300 per seat. More traditional 110 V AC systems cost about $750 per seat while a combination AC + USB outlet is a little more expensive – approximately $875 per seat, excluding engineering, certification and installation costs or the opportunity costs lost to aircraft downtime. He notes there is not always a one-to-one relationship between seats and outlets, which can be installed in between seats. Additionally, some aircraft have more than one type of outlet per seat – one integrated into the seatback screen and another elsewhere in the seat architecture.

> "In-seat power producers report there is no question airlines can charge for charging but the real question is whether they would or should."

Foster has current and forecast penetration rates for the single-aisle and twin-aisle markets, as well as by technology type – USB vs AC vs combination AC+USB vs IFE-integrated power – cabin class and region.

However, his Inflight sneak peek didn't extend that far but did provide a growing anticipation for the release of his study.

JUICE-FEE

In-seat power producers report there is no question airlines can charge for charging but the real question is whether they would or should. It would clearly be lucrative, but it is another instance of airlines imposing a fee on amenities that used to be free, constituting yet another way to alienate already disapproving passengers.

Genovese indicates that True Blue's system will be capable of monetisation, but customers need to define their requirements first. The system would be a software-driven distribution system – basically an AC-to-DC converter that has software programmed to distribute the power to the USBs that have paid for power. He suggests there would also be a need to have some co-ordinated software development with the airline to be able to select, pay and use the power service through the airline app or website to enable airlines to collect payment.

Similarly, Astronics tells Inflight it has always had the ability to enable the charge-for-power model with its in-seat power systems.

"However, after lengthy discussions with airlines, none of our present customers have elected to take a charge-for-power approach," reveals Markert.

It's a similar scenario for KID-Systeme. According to product manager Jens Brey, the company is looking into different concept cases to collect feedback from customers and passengers. "But there is no product like this in our current portfolio," he concedes.

Cobalt Aerospace's Unplugged wireless charging system also has the capability to be monetised, according to sales marketing manager Edward Young. "It would be very lucrative, particularly for economy operators, to have a pay-as-you-charge system. For economy airlines monetising is to be both expected and very lucrative for the operator. This is definitely a great business model and one that is to be expected in the near future. However, for long-haul and more luxurious airlines this ought to part of the overall passenger experience."

Genovese outlines the pros and cons of monetising power. "The pro for monetising power is it offsets the expense of adding an

in-seat power solution to a fleet of aircraft. Frequent travellers [can and do] decide to fly on one airline over another if it offered in-seat power. The cons of charging for in-seat power are that many airlines already offer power free of charge. This reminds me of when mobile phones first became available and all the services had different price tags. Now, all the mobile phone services are bundled into one price that makes it easier for the customer to manage."

While charging for in-seat power may generate ancillary revenue and amortise system cost over time, Brey believes the flip side is that power today is free and the acceptance on the passenger side is simply not there.

Genovese hints at how airlines might roll out such a service which would echo what they now do for Wi-Fi. "Frequent fliers shouldn't have to pay for power," he says. "It should be a perk for being loyal."

Lopinto disagrees. "No airline will monetise in-seat power," he says. "As the cost of in-flight Wi-Fi goes to $0 over time then they will not charge for power either."

In fact, that's exactly right, according to Markert. "The feedback we are receiving from those airlines that have considered the charge-for-power model is what to charge? In many cases they're already charging for IFEC, streaming video etc. We've experienced airborne Wi-Fi prices that vary from $7.00 to $19.00 on a domestic US flight. If a passenger is already paying $7.00 for Wi-Fi access, what do you charge for power?"

Furthermore, he echoes Genovese in discussing the complexity. "A charge-for-power architecture generally would need additional hardware to support the system which means additional weight and complexity. Simple, high mean-time-between-failure, low-weight systems are preferred. The goal is to reduce the workload for maintenance operations. Most airlines we've spoken to on this topic prefer to provide power as an amenity, keeping it simple."

WIRELESS TRENDING

Instead, airlines are exploring the next leap in technology – wireless charging.

"Our wireless charging module, Unplugged, has seen a significant increase in demand over the past 12 months," Cobalt's Young says, adding announcements are shortly in the offing. "Unplugged is integrated into many STCs and seats and is already being installed with a yet-to-be-named seat manufacturer and is even available for line-fit with an unnamed manufacturer. We believe that this has been mainly prompted by the fact that Unplugged is Qi-enabled and therefore able to charge new android phones and iPhones."

The move results from the ubiquity of wireless charging at home, in cars and even wireless-charging hotspots embedded in bars. Since IFE is all about giving passengers the same experience they have on the ground, there is no question this will come to the air sooner rather than later, depending on maintenance schedules and costs.

> "After lengthy discussions with airlines, none of our present customers have elected to take a charge-for-power approach."

Young indicates Unplugged pricing is volume dependent, saying it is the most economic, in-seat power solution. He said bulk costs are competitive with USB despite the fact it is the only flying wireless charging system commercially available. It is overwhelmingly fitted in VIP and private aircraft, installed into bar tops and side ledges.

"Unplugged offers passengers easily accessible power that doesn't comprise cabin aesthetics," he told Inflight. "Users simply place any Qi-charging-enabled device on the charging hotspot and the charging module does the rest, delivering clean, pure power with both 5 W and 15 W versions available. The diversity of Unplugged allows passengers to still use their device while charging and does not require the need for any power leads.

"Passengers prefer wireless charging," Young concludes. "No cables, no fuss. The extra bonus for operators is Unplugged is tamper-proof and immune from water ingress, thus eliminating maintenance schedules often seen with USB sockets. Wireless charging units are extremely small and thin. They blend invisibly into surfaces within the aircraft cabin and give passengers the convenience and high-tech experience they expect."

In reality, this debate surrounding monetising power should be a non-starter when considering the numerous products now being offered by third-party ancillary revenue vendors who are trying to encourage airlines away from the current ancillary model which charges for amenities that used to be free. Instead these vendors are offering products that help airlines engage with passengers in a more positive way.

They enable airlines to offer passenger-amenity services throughout the journey, such as pre-ordering meals and IFE selections through the airline app, helping airlines to plan better and reduce waste. They are also offering travel-related products such as destination events, tours and airport transfers as part of the in-flight entertainment, tapping into the fact that shopping has probably surpassed sports as a global pastime.

The point is with all these new added-value products, airlines need to view in-seat power as a conduit to ancillary revenues, and not as a chargeable service in its own right. ■