

# GKN's menu of technologies has diverse R&D ingredients

by James Wynbrandt

GKN Aerospace (Booth C8942) is here at the NBAA Convention highlighting its aerospace work and key technologies, along with the activities and capabilities of the refocused and newly branded Fokker Technik completions and refurbishment division. The aerospace offerings on display include the co-cured winglet and C Series aileron GKN developed for Bombardier's CS100/300 series, as well as the C Series electrical wiring interconnection system.

The company is also showing a sample of the empennage it is providing for Dassault's in-development Falcon 5X, incorporating advanced lightweight thermoplastics in the flight control surfaces. The thermoplastic panels sharing the spotlight are 15 percent lighter than those using traditional materials, and they have lower production costs and greater fire resistance.

Additive manufacturing (aka 3D printing) is among key technologies on display. GKN claims to have the largest range of

flying AM parts, now on seven major programs in the civil, military, rotorcraft and space sectors (A350XWB, NH90 and Ariane), produced via multiple AM technologies—electron beam melting, laser deposition and selective laser sintering.

Meanwhile, GKN's Fokker Technik subsidiary is ready to step into the spotlight. "We're looking to put our name out as a 'go to' alternative to traditional, existing completion centers," said Shaun Collins, chief commercial officer. "We see that as a real growth area, given the skills and talent and resources immediately available that Holland is renowned for."

Fokker Technik now has an opportunity to demonstrate those capabilities, as Boeing Business Jets has contracted the company to design and perform the interior completion of a BBJ ordered by the Dutch Government for transport of government officials and the Dutch Royal family. Interior design activities are under way and the aircraft is scheduled



The co-cured composite winglets for Bombardier's C Series regional jets come from GKN.

for delivery to the Dutch Government in 2019. A two-cabin layout configured for 24 passengers (12 VIP, 12 staff) is planned. Boeing and the Netherlands' Fokker have worked together on previous BBJ conversion and completion projects. The current state transport, a Fokker 70 (PH-KBX), has been in service for two decades.

Looking ahead at the division's prospects, Collins said, "The client base is limited; everyone pursues the same opportunities. Perhaps we have a slight advantage

in our long heritage in [aircraft] construction and conversions, and we have a competitive edge in South Netherlands in price as well, compared with our major competition in Switzerland and Germany."

Looking beyond Europe, Collins noted the Asian market "is becoming very active" for preowned executive airliners, creating many potential customers. "Nobody wants to drive around in a 10-year-old Boeing with a 10-year-old interior," he said. □

## Van Nuys Airport takes on major solar energy project

by Curt Epstein

Aviation property development and management firm Aeroplex/Aerolease Group has partnered with Los Angeles-based PCS Energy to create the first solar energy project at California's Van Nuys Airport (VNY). The project, consisting of some 4,000 solar panels, will cover 150,000 sq ft on the roofs of the four hangars at the company's Van Nuys East complex. "We've been working on it for a number of months," said Aeroplex CEO Curt Castagna. "The reflectivity test with the FAA has been approved."

Once online, the system will generate 2.5 million kilowatts of energy annually—enough to power 200 homes—and reduce carbon dioxide emissions by more than four million pounds a year. According to the terms of the deal, PCS leased the roof space and will install the panels, as well as retrofit all of the complex's interior offices, ramp and parking lot light fixtures to LED.

The installation, which will not require any structural reinforcement of the hangars, is expected to be completed and

generating power by year-end. Under a separate agreement, PCS will sell 100 percent of the energy to the Los Angeles Department of Water and Power for the next 20 years.

VNY recently achieved Level 2 Airport Carbon Accreditation for its carbon management and reduction, on a path toward carbon neutrality. It is the first general aviation airport to be so designated.

"There exists tremendous potential for airports across the nation to implement sustainable energy projects, and we hope to continue in these efforts by leading with this initiative," said Castagna. His company is currently in negotiations for a similar project at Long Beach Airport/Daugherty Field, where it operates a 12-acre facility. □



The solar project will cover the roofs of four hangars at Aeroplex/Aerolease Group's complex at VNY, including its newly-built 50,000-sq-ft hangar (highlighted), and will generate enough energy to power 200 homes a year, as well as reduce carbon emissions.



CHAD TRAUTVETTER

### TNA AVIATION INTRODUCES HEAVY-LIFTING REMOTE-CONTROL TUG

TNA Aviation Technologies has launched a heavy-duty version of the TowFlexx 5-series remote-controlled electrical towbarless aircraft tug. The tug is rated for aircraft of up to 165,000 pounds mtow, though its prime movers have a tractive motor power up to 176,000 pounds. According to TNA, its heavy-duty model is designed and configured for significant stress and can handle aircraft on steep slopes and inclines.

"Customers have been asking for an affordable and compact tug system, especially in the heavy-duty weight range of 100,000 to 150,000 pounds mtow, and we've responded by introducing a smart and powerful electrical aircraft tow vehicle, making it much easier to overcome slopes and inclines and operate under tough environmental conditions," said Michael Turwitt, managing partner of TNA Aviation Technologies. "The TowFLEXX HD features a special transmission and gear drive combined with many features that deliver unique functionality normally not even found in bigger and more expensive conventional tow tugs," he added.

The company said that remote controlled aircraft tugs are more efficient, can improve hangar space utilization and increase safety. —C.T.