

INTELLECTUAL PROPERTY

(This section must be signed and returned to Carole.Hedden@AviationWeek.com)

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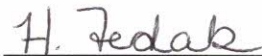
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Thank you for participating,



Gregory Hamilton
President
Aviation Week Network

Acknowledged, agreed, and submitted by



Nominee's Signature

06.25.20

Date

Nominee's Name (please print): Heidi Fedak

Title (please print): Director, Corporate Communications

Company (please print): Gulfstream Aerospace Corp.

NOMINATION FORM

Name of Program: Gulfstream Sustainable Aviation Fuel Initiative _____

Name of Program Leader: Mark Burns, President, Gulfstream _____

Phone Number: 912.395.9680 _____

Email: emily.belford@gulfstream.com _____

Postal Address: 500 Gulfstream Rd, M/S C-1, Savannah, Georgia 31406 _____

☐ Customer Approved

○ Date: _____

○ Contact (name/title/organization/phone): _____

☐ Supplier Approved (if named in this nomination form)

○ Date: _____

○ Contact (name/title/organization/phone): _____

CATEGORY ENTERED

Refer to definitions in the document “2020 Program Excellence Directons.” You must choose one category that most accurately reflects the work described in this application. **The Evaluation Team reserves the right to move this program to a different category if your program better fits a different category.**

Check one

☒ Special Projects

☐ OEM/Prime Contractor Systems Design
and Development

☐ OEM/Prime Contractor Production

☐ OEM/Prime Contractor Sustainment

☐ Supplier System Design and Development

☐ Supplier System Production

☐ Supplier System Sustainment

Point Distribution

Executive Summary: Make the Case for Excellence (15 pts)		
Metrics 10 pts Predictive Metrics (10)	Program Volatility/ Uncertainty/Complexity/ Ambiguity 25 pts Describe overall VUCA (10) Cite examples of team response (15)	Organizational Best Practices & Team Leadership 40 pts Innovative Tools and Systems (15) Unique Innovative Processes for People Development/Knowledge Transfer (15) Unique Practices for Customer Engagement (10)
Value Creation (10 pts)		

Abstract

In 150 words or less, why is this program excellent in terms of execution?

(12 pt. Times Roman)

Gulfstream has been committed to using a truly sustainable aviation fuel (SAF) since 2011, when a Gulfstream G450 became the first business jet to cross the Atlantic on biofuels. Since then, Gulfstream has established itself as a leader in the use of SAF, becoming the first business jet manufacturer to sign a multi-year offtake agreement for a consistent supply of renewable fuels, the first to use that fuel in its daily operations and the first to offer it to customers. Sustainable aviation fuels are just one element of Gulfstream's enterprisewide efforts to support sustainability within the industry, meet company and customer goals and achieve the industry aim of reducing carbon dioxide emissions.

Purpose

Provide a 150-word description of the purpose of this program, spelling out all acronyms and correct acronyms

(12 pt. Times Roman)

For more than a decade, Gulfstream has made the commitment to its employees, operators, customers, the industry and the communities where its employees live and work to operate more efficiently and sustainably through several initiatives, including the use and promotion of sustainable aviation fuels (SAF). The environmental benefits of using SAF are considerable. For the SAF sourced by Gulfstream, every gallon used saves at least 60% in CO2 emissions on a life-cycle basis versus petroleum-based jet fuel. Some can be even greater. Additionally, these alternative fuels are purer and burn more cleanly. The aim of the program is to demonstrate the viability and utility of SAF, promote and encourage its use to increase demand and therefore supply, and help the industry achieve its objectives of carbon neutral growth and reduced carbon dioxide emissions.

Executive Summary: Make the Case for Excellence (Value: 15 pts)

What is the vision for this program/project? What unique characteristics and properties qualify this program for consideration? (12 pt. Times New Roman)

Since 2015, when it became the first business jet manufacturer to sign a multi-year offtake agreement for sustainable aviation fuels (SAF), Gulfstream has been working to explain the benefits of SAF, promote the use of these fuels to its operators, demonstrate the viability of the fuels to the broader industry, improve the image of business aviation's sustainability efforts and spark demand among operators to increase both the production and availability of SAF; thereby, helping the industry achieve its goal of reducing total CO2 emissions by 50% by 2050 relative to 2005. Even before the increased visibility of environmental activist Greta Thunberg and the adoption of the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) in October 2016, Gulfstream was demonstrating and promoting the viability and necessity of SAF to ensure the long-term health of the business aviation industry and our planet.

To demonstrate the benefits and utility of SAF to customers, Gulfstream has been using SAF for its corporate, demonstration, Customer Support and flight-test fleets. The company has used more than 900,000 gallons of the blended fuel, flown more than 1.2 million nautical miles on the fuel and reduced carbon dioxide emissions by more than 1,500 metric tons. It has participated in and sponsored a series of industry events intended to promote and publicize SAF use. And its ultimate goal is to make SAF as commonplace and widely available as traditional petroleum-based Jet A.

All of this requires a delicate balance, as promoting the use of SAF also promotes the use of business jets, which are often the subject of environmental scrutiny, despite their rather limited contribution – 2% – to the aerospace industry's emissions. Even with this challenge and the complication of limited SAF supply around the world, Gulfstream has been able to establish a first-rate SAF utilization and promotion program that has been recognized both inside and outside the industry.

(Do not exceed 10 pages in responding to the following four descriptions; allocate those 10 pages as you deem appropriate, but it is important that you respond to all four sections.)

VALUE CREATION (Value: 10 pts)

➤ **Clearly define the value of this program/project for the corporation beyond profit and revenue**

Protecting our communities and future generations is the guiding principle of Gulfstream's sustainability strategies, and supporting our industry's efforts to do the same is a priority. To that end, in 2009, Gulfstream joined the business-aviation industry in committing to the sustainability goals set by the National Business Aviation Association, the General Aviation Manufacturers Association and the International Business Aviation Council. Those goals include a reduction in total CO2 emissions by 50% by 2050 relative to 2005. A major effort to meet those goals is the use of sustainable aviation fuels (SAF), which could account for 40% of those reductions in carbon emissions.

In 2015, Gulfstream became the first business-jet original equipment manufacturer (OEM) to establish an agreement for a consistent supply of renewable fuels, despite a then-significant price advantage for Jet A fuel. Even knowing the financial implications of the more sustainable fuel, Gulfstream continued to work with the refiner and distributor to secure its SAF supply, which was used to fuel daily flight operations out of the Savannah headquarters and not intended for profit or revenue.

Less than a year later, the SAF was refined and transported to Savannah, and since March 2016, Gulfstream has used SAF for its corporate, demonstration, Customer Support and flight-test fleets, despite the continuing price disparity. The company has today flown more than 1.2 million nm over 600 flights with the blended fuel and reduced carbon dioxide emissions by more than 1,500 metric tons.

In 2019, Gulfstream achieved another industry first by offering the fuel to customers, which began at our California facilities in Van Nuys and Long Beach. In this case, sustainability continues to be the focus over profits, as Gulfstream absorbs the higher price of SAF and does not pass that on to customers. The drop-in fuel is stored with Jet A and sold at Jet A prices.

Gulfstream has also used SAF to raise awareness and demonstrate its excellent drop-in performance. In 2016, Gulfstream flew the Gulfstream G450 and Gulfstream G550 to the European Business Aviation Association Convention & Exhibition (EBACE) on SAF. In 2019, the business aviation industry held sustainability events in the U.S. and the European Union to reaffirm its commitment to SAF. For the first of those, in January of that year, Gulfstream used the fuel to power a record-breaking Gulfstream G280 flight from Savannah to Van Nuys, California, and back again. In spring 2019, Gulfstream participated in another industry event, this time in Farnborough, England, and flew the G550 across the Atlantic on SAF. A few days later, the Gulfstream G650ER, G600, G550 and G280 all flew to EBACE on SAF in support of industry efforts.

In addition to industry events, Gulfstream has made many flights on renewable fuels to the National Business Aviation Association Business Aviation Convention & Exhibition to create more visibility of the benefits of using SAF.

The SAF program again demonstrates Gulfstream's leadership position within the industry and reflects the company's commitment to integrity: doing the right thing even when no one is watching. While SAF is more expensive than traditional fuel, its non-monetary benefits far outweigh the price disparity.

➤ **Clearly define the value of this program/project to your customer**

Gulfstream's customers around the world have been increasingly focused on lessening the environmental impact of their operations. A major step in these efforts was to start offering SAF to customers out of our California facilities in Long Beach and Van Nuys. We demonstrate leadership and support customers further in this by not raising the price of the fuel blended with SAF.

To support their sustainability goals, companies around the world also want to ensure that they are doing business with entities that are also committed to sustainability. Gulfstream's use and publicity of SAF help our customers meet that need as well.

As we do face challenges in fuel availability, transport and storage around the world, our efforts to raise awareness and demonstrate the fuel's performance abilities also benefits the customer in their pursuit of SAF and other sustainability initiatives.

➤ **Clearly define the value of this program/project to members of your team**

Gulfstream has a reputation for listening to its customers and exceeding their expectations. Even before the increased focus on sustainable aviation fuels and environmental responsibility, the company established an environmental strategy team committed to ensuring the continued viability of the industry in the face of increasing environmental activism and challenges.

➤ **Clearly define the contribution of this program/project to the greater good (society, security, etc.)**

While Gulfstream's commitment to SAF aligns with the business-aviation industry's goal to reduce greenhouse gas emissions, Gulfstream's primary commitment to sustainability is driven by the company's goal to protect our communities and future generations. Gulfstream maintains a leadership role among peers by pioneering SAF sourcing and use – being the first business-jet OEM to establish a dedicated supply of SAF and the first to offer it to customers. It is important that the company pursue such leadership to demonstrate our commitment through action.

METRICS (Value: 10 pts)

Please respond to the following prompt:

➤ **How do your predictive metrics drive action toward program excellence?**

(12 pt. Times Roman)

The business-aviation industry uses tools to regularly monitor the progress the industry is making toward its goal to improve fuel efficiency and reduce CO2 emissions. Using those tools, the industry can monitor progress against its goals, including carbon-neutral growth starting in 2020 and half of 2005 emissions levels by the year 2050. Keeping track helps identify areas that may need improvements.

At Gulfstream, we are doing the same with our proprietary model to measure how we are doing against those metrics, with our own corporate fleet as well as the full Gulfstream fleet around the world. From there, we can understand the progress we are making toward industry goals, monitor the progress, identify trends and areas needing improvement, provide regular status reports to Gulfstream's leadership team and make adjustments as needed.

An example of how we drive action toward program excellence is the establishment of Gulfstream's Carbon Offsets Program, another industry first. To ensure our positive progress toward industry goals, Gulfstream established a program that offers participants the opportunity to pay an annual fee based on aircraft utilization to fund activities that generate an equal reduction in carbon emissions. Gulfstream's carbon offset service is among a comprehensive portfolio of offerings in the company's turnkey support, operations and maintenance program, Aircraft Ownership Service (AOS). Gulfstream does not charge

operators a fee to administer its carbon offset service, and there is no contractual commitment. Customers simply let Gulfstream know their projected annual flight hours and are invoiced a monthly fee, which is invested in environmentally beneficial activities through a third-party provider chosen by Gulfstream.

DEALING WITH PROGRAM CHALLENGES (VOLATILITY, UNCERTAINTY, COMPLEXITY, AMBIGUITY, OR VUCA)

(Value: 25 pts)

Please respond to the following prompts:

➤ **10 pts: Describe overall VUCA faced by your project/program.**

A primary component of the VUCA faced by widespread use of sustainable aviation fuel (SAF) is to guarantee the fuel is produced in an environmentally, socially and economically responsible way. This means that the production of SAF must not contribute to deforestation, water pollution, global hunger or greenhouse gas emissions. With today's nascent production of SAF, it can be challenging to guarantee, despite all the best intentions, that the source of SAF adheres to specific criteria that meet this sustainability standard.

Beyond that, there is the challenge of the fuel supply. While many entities are exploring the possibility of producing SAF, only one entity in the US is doing so in any significant way. We find ourselves in a situation where we have successfully demonstrated and promoted the use of the fuel, but know there is much more to do in order to promote the widespread availability of this drop-in fuel. To that end, Gulfstream has been monitoring and supporting each element of the value chain, including new sustainable feedstock options being studied by the agricultural industry.

➤ **15 pts: Cite specific example(s) and how your team responded.**

(12 pt. Times Roman)

Gulfstream has addressed these VUCA in two major ways: obtain third-party certification of the sustainability of the fuel, addressing Gulfstream's specific criteria, and monitor the SAF industry in this space through active involvement and engagement.

For third-party certification, Gulfstream teamed up with the Roundtable on Sustainable Biomaterials (RSB). RSB is an international, multi-stakeholder initiative that brings together farmers, companies, non-governmental organizations, experts, governments and inter-governmental agencies concerned with ensuring the sustainability of biomass production and processing. The roundtable evaluates all aspects of the refinery, from feedstock, investments and refinery offtake agreements and provides us with the assurance that the supplier meets these rigorous sustainability criteria.

ORGANIZATIONAL BEST PRACTICES AND TEAM LEADERSHIP (Value: 40 pts)

Please respond to the following prompts:

- 15 pts: **In executing the program, what unique and innovative practices, tools and systems frame your program and help you achieve program excellence?**

Before launching the sustainable aviation fuel (SAF) program, Gulfstream worked closely with the supplier and industry organizations to source the best fuel that meets our sustainability criteria and the performance standards required by Gulfstream aircraft. This was done by:

- Working with the Commercial Aviation Alternative Fuels Initiative to identify the best process for producing the fuel for the environment and our aircraft, which is an ASTM-certified process called HEFA (Hydro-processed Esters and Fatty Acids) to produce jet fuel
- Choosing World Energy as the fuel supplier, because their fuel comes from oils, greases or agricultural waste
 - Using agricultural waste avoids the land and water use issues that can arise with certain types of energy crops
- Working with World Energy before the refinery was online to ensure processes, feedstock and excellence
- Ensuring World Energy and the distributor, World Fuel Services, were committed to maintaining supply at a reasonable price point

- 15 pts: **What unique and innovative processes and practices are you using to develop people and transfer knowledge and how do you know they are working?**

To maintain an active role in the SAF and business-aviation industries, Gulfstream works with a number of forums and organizations that help us stay engaged in the full value chain of SAF. The environmental strategy and regulatory team has a role in a number of organizations, including:

- Federal Aviation Administration Center of Excellence for Alternative Jet Fuels and Environment
- World Economic Forum's Clean Skies for Tomorrow Coalition
- International Civil Aviation Organization CAEP Fuels Task Group
- Commercial Aviation Alternatives Fuels Initiative
- Sustainable Aviation Fuel Coalition

Gulfstream has also supported and sponsored a number of SAF summits and related events, with the intent of demonstrating the value and viability of SAF to the media, legislators and business aviation community. Summits have taken place in Van Nuys, California; Farnborough, England; Geneva; and Las Vegas. With the best practices and up-to-the-minute developments gained by this involvement, Gulfstream can maintain its leadership vision to promote best practices and educate our customers, employees and the industry as a whole.

Gulfstream has received third-party recognition for the work we have done with SAF. In 2015, Gulfstream was featured in the Air Transport Action Group's (ATAG) publication Aviation 100 Climate Solutions, a publication showcasing 100 innovative sustainability projects implemented by industry organizations from around the world. This publication was distributed to governments at the COP21 meeting in Paris, ICAO Assembly and ICAO Council and ATAG's Global Sustainable Aviation Summit.

As Gulfstream's SAF program progressed, it gained recognition in 2019 with the Business Intelligence Group's Sustainability Leadership Reward.

➤ 10 pts: **What unique practices are you using to engage customers and how do you know?**

(12 pt. Times Roman) (Charles also has a slide with a list of customers who have expressed interest in SAF; perhaps, he can share how that list has grown over the past year or two. It was once a single company and now lists several)

Even before Gulfstream started using sustainable aviation fuel (SAF), we had conversations with customers to get a sense of where they were in relation to using SAF to power their aircraft, and we did this largely through our Customer Advisory Board (CAB) and Advanced Technology Customer Advisory Team. We know customers are engaged and our efforts to demonstrate the value and viability of the fuel are working, because many of our customers have asked us to help them obtain their own continuous supply of SAF, and we connected them to our refiner. In some cases, Gulfstream's delivery of SAF to customers is a contractual obligation.

We also continue to engage them and demonstrate our leadership through:

- Setting city-pair speed records and demonstrating flights on SAF that align with the high-performance capabilities Gulfstream aircraft achieve
- Holding ongoing SAF sessions at CAB meetings and in-person and virtual Gulfstream Operators Conferences
- Connecting customers to key aviation events where they, too, can publically demonstrate their leadership using SAF on a regular basis as well as advocate for a truly sustainable future