alphaDIRECT MANAGEMENT SERIES

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IN FOCUS: GEVO, AVFUEL CORPORATION AND THE "FLY GREEN DAY" AT VAN NUYS AIRPORT

This report focuses on Gevo, Inc. (GEVO), its partner Avfuel Corporation and the recently completed "Business Jets Fuel Green: A Step Toward Sustainability" event at Van Nuys Airport (VNY) in Southern California.

Avfuel, along with Gevo, supplied fuel to Castle & Cooke Aviation and Signature Flight Support at VNY for the event. Source: www.avfuelblog.com

THE *alpha*DIRECT INSIGHT

An important element of the "Fly Green Day" held at Van Nuys Airport on January 17 was to demonstrate that renewable jet fuel can become a main stream drop-in alternative to today's fossil-based jet fuel. With a multi-year supply agreement in place, Gevo and Avfuel are collaborating to grow the use of Gevo's ATJ in order to help the aviation industry with their goal of converting some of the jet fuel in North America to sustainable jet fuel by 2020 and beyond. This alphaDIRECT Management series focuses on Gevo and its competitive advantages, and its collaboration with Avfuel Corporation during the "Fly Green Day" event at Van Nuys Airport as a first-of-its-kind within the general and business aviation sector.

GEVO Business Snapshot

Founded: 2005
HQ: Englewood, Colorado
Ticker: GEVO (NASDAQ)
Sector: Chemicals & Material
Website: www.gevo.com

About *alpha*DIRECT Advisors

*alpha*DIRECT Advisors, a division of EnergyTech Investor, LLC, is an Investor Intelligence and publishing firm that creates and implements digital content and programs to help investors better understand a company's key drivers including industry dynamics, technology, strategy, outlook and risks as well as the impact they could have on the stock price. alphaDIRECT's expertise encompasses a variety of sectors including Clean Transportation, Emerging EnergyTech, Energy Services, Smart Buildings, Solar, Water Value Chain and Industrial. alphaDIRECT was founded by Wall Street veteran and research analyst, Shawn Severson, after seeing a significant shift in the investment industry that resulted in less fundamental research conducted on small cap companies and a significant decline in information available to all investors. alphaDIRECT's mission is to bridge that information gap and engage companies and investors in a way that opens information flow and analytical insights.

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or follow us on LinkedIn or Twitter.

Participants

Patrick R. Gruber, Ph.D.
Chief Executive Officer
Gevo, Inc.
Dr. Patrick Gruber is the CEO of Gevo, Inc. and has served as a Director of the company since 2007. Previously, he was the CEO of Outlast Technologies Inc. He also co-founded NatureWorks, LLC (formerly Cargill Dow, LLC), and served as VP of Technology and Operations and CTO until 2005. In addition, Dr. Gruber is an advisor to the Energy Future Coalition and currently serves on the boards of directors of Gevo. Dr. Gruber has received numerous awards for his outstanding contributions in the field of biotechnology and its application in biological engineering, environmental science, bio-refining and bio-based products, and well as for his work in the development and commercialization of green chemical production processes, his contributions to industrial biotechnology, and his ability to identify and act on business opportunities.

Keith Sawyer
Manager of Alternative Fuels
Avfuel Corporation
After a 40-year career with Chevron beginning in 1977, Sawyer joined Avfuel in 2016 as its regional business development/supply chain manager where he was responsible for developing and nurturing relationships with fueling locations throughout the Western U.S., Canada and Alaska. To further capitalize on his expertise in the fuel market, Sawyer became Avfuel's manager of alternative fuels in 2017, leading all aspects of evaluating the sustainable alternative jet fuel market and its suppliers while representing Avfuel within the environmental and fuel supply chain groups associated with GAMA, NBAA, NATA and IBAC. During Sawyer's tenure at Chevron, he oversaw petroleum and natural gas product supply chain management, cargo operations, general aviation business, branded programs, aviation investments, and marketing in various markets, operating out of Perth, Western Australia; Houston, Texas; San Ramon, California; Almaty, Kazakhstan; San Francisco, California; and Vancouver, British Columbia.

Mr. Shawn Severson
Founder and CEO
***alpha*DIRECT Advisors**
Mr. Severson is the founding partner of *alpha*DIRECT Advisors, a division of EnergyTech Investor, LLC. He has over 20 years of experience as a senior research analyst covering the technology and cleantech industries. Prior to founding ADA, he led the Energy, Environmental and Industrial Technologies practice at the Blueshirt Group. Mr. Severson was frequently ranked as a top research analyst including one of the Wall Street Journal's "Best on the Street" stock pickers and multiple awards as Starmine's top three stock pickers.

ABOUT GEVO

Gevo, Inc. (Gevo), is a renewable chemicals and biofuels company that focuses on the development and commercialization of alternatives to petroleum-based products based on isobutanol produced from renewable feedstocks. The company produces renewable isobutanol at its wholly-owned production facility in Luverne, MN, and further converts this into alcohol-to-jet fuel (ATJ) and isooctane at a production facility in Silsbee, TX. The company engages in research and development focusing on the development of its proprietary biocatalysts for the production of renewable alcohols, as well as chemical catalysts for the conversion of renewable alcohols to high-value fuels and chemicals. Gevo was founded in 2005 and is headquartered in Englewood, CO.

ABOUT AVFUEL CORPORATION

Avfuel provides fuel and services to the global aviation industry and is the leading independent supplier in the United States. Established as a supply and logistics company more than 45 years ago, Avfuel is core competent in every aspect that surrounds the delivery of fuel—from refinery to wingtip. Avfuel combines global access with personalized service throughout a fueling network of more than 3,000 locations worldwide and 650+ Avfuel-branded FBOs. Our 100% dedication to aviation demonstrates our passion and commitment to a global community that prospers on the movement of goods and services around the world.

Shawn Severson: Thank you very much Pat and Keith for taking the time to speak with us today and the alphaDIRECT Investor Network. Could both give us a bit of your background and a bit about your company before we begin?

Patrick Gruber: Absolutely, Shawn. Keith, would you like to go first?

Keith Sawyer: Sure, that's great Pat, thank you. And thanks for this opportunity, folks. I'm Keith Sawyer, the manager of alternative fuels at Avfuel Corporation, a leading independent global supplier of aviation fuel and services. A large part of our business is in the United States and Canada. Prior to joining Avfuel in late 2016, I spent 40 years with Chevron Corporation in various product groups in the upstream and downstream businesses, largely focused on the supply chain and business development. The work that I'm doing with Avfuel, as well as Pat and his colleagues at Gevo, is in line with my background.

Patrick Gruber: That's great, Keith, thanks. I'm the CEO of Gevo, Inc. and I've been pioneering renewable resource-based products for most of my 30-plus year career. It's always been a quest of mine to help replace fossil-based products that pollute by making greenhouse gases, and other emissions, with drop-in products that are cleaner, greener, and eventually cheaper, particularly as oil prices climb.

Shawn Severson: Pat, can you give investors a brief overview of what renewable isobutanol is and how it is transformed into sustainable jet fuel for aircraft?

Patrick Gruber: Isobutanol is actually one of the flavor characteristics of Scotch whiskey. Scotch whiskey is made by fermentation that is distilled, but there's lots of ethanol in a Scotch whiskey. What we've done is genetically engineered a yeast to produce isobutanol instead of producing ethanol. The yeast eats sugars and produces isobutanol. We take the isobutanol produced, which has four carbons, and we apply chemistry to it, catalytic chemistry, in a simple process. During this catalytic process we strip off the alcohol group as water, which leaves four carbons behind. We connect two of those four carbon groups together and that makes isooctane. If we add another four-carbon unit we have twelve carbons and that makes jet fuel. Now of course you have a little bit of distribution around these things, a mix of chain lengths, but generally centered around twelve carbons is what jet fuel is comprised of.

This process is different from other processes, especially petrochemical processes, in that we're starting with a very clean renewable carbon-based chemical, isobutanol. We use chemistry to create two different products, jet fuel and isooctane, both of which are valuable. That's different than if we produced a mishmash to begin with, which is typical in the chemical industry. Here you'd have lot of what people refer to as cats and dogs, heavies and lights, the byproducts, or co-dependent products that have low value, we don't have that. Our process produces high value products straight away, and cleanly.

Shawn Severson: Is that unique to Gevo or is that widely available commercially?

Patrick Gruber: Great question, Shawn. This is unique for Gevo. We're transforming and moving from a water-based system into an organic petrochemical system.

Petrochemical people hate water in their production processes, but biological systems have to be in water. Gevo is focusing on this crossover piece of chemistry, which is unusual and unique, and chemical companies generally aren't used to it. What makes our technology distinct is this very efficient transformation of isobutanol into two products, jet fuel and isooctane.

Shawn Severson: Alright, thanks Pat. Keith, what are Avfuels' target markets, the size of the market and how does it differ from the commercial aviation industry that most people are familiar with like United or Alaska Air?

Keith Sawyer: Avfuel's target markets for sustainable alternative jet fuel come from the company's various market segments—in particular for this product, business aviation, fixed base operators and cargo operators.

In terms of business aircraft, you're talking about an expansive market—many times more than the commercial fleet. There are about 20,000 active business aviation aircraft in the world that fly missions almost on a twenty-to-one basis as compared to commercial aviation. So, naturally, one of our target markets for the sustainable product is these aircraft, which are typically owned by corporate flight departments, some of which have their own fuel farms. This distinct piece of the aviation business is quite significant. The people who fly in business aviation aircraft are often influencers and decision makers in business, so it makes sense to reach out to them for commitments on this new, sustainable product as potential early adopters.

This also means targeting where these aircraft are flying—fixed base operations. We supply a large volume of fuel and services to 650-plus Avfuel-branded fixed base operators who cater to business aviation aircraft. We're working diligently with these customers on education of SAJF.

However, business aviation's volume is only around 2.5 billion gallons in the United States compared to 26.5 billion gallons of the total jet fuel demand in the U.S., with the largest component being commercial airlines and cargo carriers. With this in mind, we're also looking at a number of the small cargo airlines that feed into the majors, such as FedEx and UPS at the regional hubs, as potential SAJF users.

Shawn Severson: Do you see an increased demand for renewable fuels specifically within the business aircraft market? Can you elaborate a bit on why you think your customers would actively choose a green fuel option versus conventional jet fuel?

Keith Sawyer: That's a really terrific question. Yes, I'm seeing an emerging demand. Several weeks ago, Avfuel participated in a conference in San Antonio—a great face-to-face opportunity with customers. Every time we meet with our customers, our fixed base operators, our corporate flight departments and commercial airlines and operators in the in the cargo segment, we see an emerging awareness. Has it translated to demand? Not quite yet. However, we are seeing some traction as we go forward, but our efforts are largely on education and promoting the likely availability of SAJF as we go forward.

The reason a lot of the companies and pilots would select a green fuel, or adopt a green fuel in their purchasing, relates to their sustainability metrics around their own corporate, airport or individual carbon

footprint goals. We have a fixed base operator in Colorado whose customers are paying a premium for their hangars because they use solar power to heat the hangar. So, there is a demand, and this green option is going to be a key component of the business once commercial production is up and running, and it evolves to either price parity or a small premium to parity over the price of jet fuel.

Shawn Severson: Thank you. On January 17, Gevo and Avfuel partnered to supply sustainable jet fuel for the Business Jets Fuel Green event at the Van Nuys Airport. Can you start by explaining how your initial relationship came about and also talk about your exclusive fuel supplier agreement that was entered into in July, 2018?

Patrick Gruber: Keith, why don't you go first?

Keith Sawyer: As part of our assessment, Avfuel's president and CEO, Craig Sincock, asked me to look at sustainable alternative jet fuel and its possible role in our product offering and services portfolio. We made a list of current producers and potential producers going forward in the sustainable alternative jet fuel market. Gevo, in our opinion, was going to be first to the post, meaning first to commercial production, and its Luverne facility for production on a commercial scale is located in a business and geographic sweet spot for Avfuel in the Northern Midwest, just based on the number of customers that we already have up in that area. We began discussions and felt that this would be a very good place to begin our commercial relationships with a company that's going to produce SAJF. We were also relying on the role that Avfuel could play beyond just selling the product, working closely with Gevo in other areas to enable the commercial development and deployment logistically of SAJF to our current and potential customers.

Shawn Severson: Pat, do you have anything to add?

Patrick Gruber: When we look at Avfuel, we see a company who wants to meet their customer demand, the future customer demand and plan for it. Now Avfuel has somewhere in the neighborhood of three thousand jet fuel outlets, which is a pretty big footprint and they're active all over the world. Avfuel is a good partner for us, we are a good match. The business aviation segment is substantial. There are people who are leaders here who want to do something about their footprint as they fly their airplanes. We saw the kind of conversations during the World Economic Forum when people were criticized for their emissions associated with fossil jet. So, we have to look to the future as a start, will people want to make a difference? I think the answer is "yes".

Shawn Severson: Can you talk about the importance of the Business Jets Fuel Green Event at the Van Nuys Airport? Was this the first time a full truckload of sustainable alternative jet fuel was delivered? How many aircraft flew on the SAJF?

Patrick Gruber: One of the questions that always comes up whenever you're touching anybody who flies especially engineers and pilots, they want to know if it's reliable. Is it safe and can it be used on scale? It's really about educating people in the industry about the product. Renewable jet fuels have been approved for use by ASTM and the government, as a blend with petro-jet). From a fundamental safety point of view, these renewable fuels have been extensively

tested and approved for use on a commercial scale. Still, you have to continue to educate people in the industry and there's questions like, can it go into a pipeline? Can it get into a tank? Can it go through the hydrant systems? Can it go into trucks? Are there issues with pumps, etc. We've successfully completed a couple Fly Green Days around the world, and we did one last year at Chicago O'Hare airport and also one in Brisbane Australia with Virgin Australia. We clearly wanted to make the point that in fact our renewable jet fuel really behaves as typical jet fuel and educate people while answering all of their questions.

Van Nuys was along those same lines of education, and Avfuel and Keith were intimately involved in making it happen.

Keith Sawyer: Van Nuys was an opportunity for our coalition of business aviation associations, which are the National Aviation Transportation Association, the lead organization on this initiative, supported by the General Aviation Manufacturers Association, the International Business Aviation Council and the National Business Aviation Association. These four associations, along with Avfuel, Gevo and others, fueled demonstration flights with SAJF. Additionally, some 150-plus business aviation aircraft were fueled by SAJF that day. All four FBOs on the airport participated in the event.

We successfully built awareness, as Pat said, in order to prove the concept that SAJF is a viable alternative for petroleum-based jet fuel. For Avfuel, it was a very successful rehearsal associated with the logistics of blending the neat product with refined jet fuel, delivering it to the fixed base operators and having the fixed base operators dispense the fuel into the aircraft that transited at the airport that day, as well as the demonstration flights.

Shawn Severson: Pat, can you clarify and highlight the differences between what took place at O'Hare on the Fly Green Day and at Van Nuys? Is there anything incremental or substantively different about those two that we should know?

Patrick Gruber: The project at O'Hare was primarily aimed at teaching everybody about the blending costs and how to get renewable product through the tank, pipelines and hydrant systems into the airport and the planes, basically debunking the myth that it's prohibitively expensive to use sustainable alternative jet fuels in these kinds of systems. People had previously assumed that it would cost a buck per gallon to blend so that's really what we were proving out, and of course getting people used to the idea that this, in fact, can work with existing commercial infrastructure.

Van Nuys was a little bit different in that it's about building awareness and that was really our priority. People need to know this stuff's available and real, which they don't know in general. It is one thing to read about it and recognize the hype but it is another to actually see the product, safely working. When you have the CEOs of these jet companies get on their planes with the renewable fuel, this sends a different kind of a message, the fact that it is really happening.

Shawn Severson: Thanks, Pat. Keith, can you talk about the blending process of the concentrated APJ with petroleum-based jet fuel and how you test fuel to meet ASTM standards?

Keith Sawyer: Shawn, it's an evolving answer. The process is actually simple, and I'll go back to Pat's opening remarks around Scotch and water. It is taking the neat product, the SAJF, and blending it with refined jet that has been approved and, of course, manufactured by the refineries in the United States to an ASTM 1655 standard. So simplistically, it's taking the neat product and blending it based on the ratio that you're working toward economically and commercially to ASTM 1655. Once the product has been blended in tank, and typically these tanks and facilities need to be off airport by JIG and ASTM standards, the product is retested and fully certified as ASTM 1655 jet fuel. It's been tested coming in and it's tested once it's been blended to ensure that it meets all the characteristics of ASTM 1655. This testing is done typically by independent surveyors such as Caleb Brett or Intertek, who provide independent verification and product testing.

Once the blended fuel has been tested, it then goes into the supply chain, typically by truck. The truck makes the delivery to the customer's storage tanks, often on site at the airport, and the customer has a set of routine delivery tests that are done that are prescribed by Avfuel and others that are required to ensure that the product is clean and bright. So, in conclusion, there's a great deal of rigor that goes into blending, and ultimately testing, certifying, recertifying and delivering the product to the customer and pumping it into the aircraft.

Patrick Gruber: And I'll add to that. One of the interesting things is that once it's blended, it gets tested, it's certified as 1655 jet fuel. That is jet fuel. It's fungible. So now it's just in the standard stream of jet fuel. It's kind of an odd concept, but you can think about it as renewable electricity for example.

Shawn Severson: How is Gevo's drop in alternative to fossil-based jet fuel different from other renewable jet fuels out on the marketplace? Also, can you expand a bit on some of your major competitive advantages within this market?

Patrick Gruber: Well, this plays back to what I just mentioned. Once the fuel is blended, it has to be ASTM1655, so everything, no matter who makes it, whatever sustainable alternative jet fuel it is, it has to meet the specifications of a jet fuel or it can't be used. There isn't a differentiation in terms of the products themselves. It comes down to the business system and cost. For example, our system is designed to use carbohydrates. We can use any kind of a carbohydrate, starting with starch made from sustainable corn up in the Midwest. It's a good place to start. It's a business system that already exists on the feed stock side, so we only had to focus on doing the fermentation to make the isobutanol and the conversion of the isobutanol to the jet fuel and octane.

In the future, we can use other sources like wood. This is why we did a partnership with Renmatix, where we focused on doing wood sugars. Renmatix brings technology to break down wood into sugars. We take those sugars and ferment them. We're sugar users. Likewise, we've been working with Praj. Praj has been working with rice straw and other forms of agricultural waste, particularly in India.. Again, they have a technology to generate sugars and Gevo uses the sugars.

So, I think to answer your questions Shawn, this is where our technology begins to really be differentiated on the raw materials side. Our

raw material base is much, much greater than our competitors. One of the really fundamental concepts is that if we're going to solve greenhouse gases for jet fuel and fuels in general, you have got to get beyond some of the niche raw materials such as used cooking oil, it's a great idea but it's only available in small amounts. It's not a supply that's anywhere close to meeting the demand for the industry at large. The same goes for vegetable oils like palm oil, palm fats or soybean oil.

Remember, when you're planning out the business systems, you have to think ten, twenty, thirty years out, because you're trying to get rid of fossil-based products. You have to use a feedstock that can grow and be sustainable and not pollute the earth as you generate raw materials. Carbohydrates are by far the most abundant source because they can come from things we can grow, they come in wood, straw, agricultural residues. Anywhere in the world we can grow something, we have the potential to generate raw materials.

In addition, our capital costs on a relative basis are relatively low in that we're doing a simple fermentation. It's akin to producing an ethanol product, an ethanol type of a fermentation with some modifications, combined with simple chemical processing steps, we generate two clean products. As previously mentioned, some of the other technologies would generate a mixture of products. Gevo's technology is set up so that it can be built in many different places and operate pretty much independently. Some other technologies are completely dependent upon being able to supply a refinery etc. which means that they have to be located and targeted to a refinery to take advantage of their infrastructure in order for the technology to work. In summary, it comes down to economical, logistical advantages, business system advantages.

Keith Sawyer: Also, I think it's really important to Avfuel to use SAJF that is manufactured with a sustainable feed stock stream of sugars and the sustainability aspect is the piece that really resonates well when you look at corporate and business aviation, when they're all trying to understand and reduce their corporate carbon footprint. That sustainability is a very, very strong link from a feed stock perspective.

Patrick Gruber: Yes, it's an interesting topic because there's lots of hype in the jet fuel space currently, but you know what? We're using a production process that is proven and works. We're going to do things that are effective and have a low carbon footprint and so we're starting off with low carbon non-edible corn. The corn is produced in our region in Minnesota, Iowa, and South Dakota., The farmers are actually capturing soil carbon at about a rate of a couple pounds per each gallon of jet fuel that we produce. And, of course, we're generating enormous quantities of animal feed. We generate approximately ten pounds of animal feed per gallon of jet fuel which is a complete paradigm shift in this market.

Also, it's important to remember that not all corn is the same. We're choosing corn that is grown by farmers who understand the concept of sustainability and the concept of protecting the land. We can apply the same type of concept to a wood feed stock, sustainably. We have to be able to show that the feedstocks don't create new environmental issues.

Shawn Severson: Pat, you had mentioned animal feed and ten pounds of protein for every gallon of ATG. What does that mean from both an economic and a carbon footprint standpoint?

Patrick Gruber: This is one of the things that we're trying to get across to people. We frequently hear people wonder about the relationship between food and fuel. That's an important concern when we start talking about renewable raw materials that originate by growing something. The things is, there does not need to be a conflict of food vs fuel. Instead the concept should be food AND fuel. It is important to understand that this is within the realm of possibility. Corn is an outstanding carbohydrate generator. It makes starch and we can convert starch to fermentable sugars. But you know what? Corn is also outstanding at generating protein. We capture all the protein, upgrade it, and then sell it into the food channel for growing beef and there's even a benefit in growing the beef, because studies show that when you formulate animal feed with our type feed product, it makes cows produce less greenhouse gases. So, it even starts to address the concern about poor beef production. It's important to stay focused on the business system, what it looks like and how we can improve it. How can we maximize it?

One of the things that's been interesting is that some people suggest we use cane sugar instead of corn. We can. In some cases it might make sense. But when thinking of giant scale, we have to wonder why for some people it is ok to use very good farm land to generate a raw material that does not contribute protein to the food chain? We understand that people want the sugar, and it is sold for a sweetener, but does it generate protein that actually solves malnutrition problems around the world? No. The fact is sugar cane is needed to produce sugar. Sugar doesn't address world hunger. Only protein does. But a world without sugar wouldn't be any fun.

We believe that feedstock solutions will be different and appropriate to the regions of the world where the feedstock is grown. In the Midwest U.S. and some of the other parts of the world, corn is a great feed stock. It has a very low carbon footprint, it can be grown sustainably, and it generates large quantities of protein. In other parts of the world, it may not make sense. In some parts of the world it may be that cane sugar, molasses, or bagasse makes sense. In other places, it will be that wood makes sense. Technologies like ours can use any of those feedstocks. We're paradigm busters. We want to change the way people think about things and we have got to get out of this mentality of "we can't solve the problems". The technologies exist and work. We can do it! We can coexist. We can make better feed and food products to make sure that the world has what it needs in terms of nutrition. It's a different game to play, it's a different way of thinking, and it's driven by a sustainable way of thinking.

Shawn Severson: Thanks Pat and Keith. Let's go back to the Gevo-Avfuel partnership itself. Can you expand a bit on your collaboration and specifically how you plan to grow the use of Gevo's alcohol to jet fuel, and also the multi-year supply agreement in place?

Keith Sawyer: The partnership is very important to us and I think over the next year you'll see Gevo and Avfuel participating and/or leading many more of these business jets fuel green type days elsewhere in the United States and potentially elsewhere internationally. These events are really

important ways for our business aviation community to understand SAJF and its likely availability and application within their businesses.

Additionally, we'll seek other opportunities for potential off-take agreements and support Gevo in the logistics of blending and distributing the product. The idea of the partnership has only really just kicked off. I see many, many more intersections evolving beyond just the pure purchase and distribution of SAJF within the Avfuel Network.

Shawn Severson: Expanding on the logistics that you mentioned, how would this work from a supply chain, in terms of availability, deliverability, on a large geographic scale?

Keith Sawyer: Well, the geographic distribution of the product is going to be predicated on the commercial availability. Once that commercial availability is identified, it'll be important for Avfuel to identify the locations where the product can be blended. We're fortunate that Luverne in Minnesota is located near a number of refineries where we lift fuel; there's the potential that we'll be able to lift the jet from there and perhaps find, in that same region, associated blending locations. Perhaps the most economical component of the distribution is either truck or rail car delivery of the neat product to locations where you can source bulk refined jet, depending on the ratio that you're looking to blend. Then you will have the distribution out to your customer base. That's still in the formative stages at present, but these are key components of the logistics and the supply chain that have yet to be fully understood and costed out.

Shawn Severson: Lastly, I assume both of you have some more perspectives and also different perspectives on what are the biggest challenges - how do you overcome those challenges on your path to commercial scale? Maybe if you could both begin by addressing what you think the hurdles are in your respective part of the supply chain, and then what the solutions are to get over in order to make this a truly commercial market. Pat, why don't you start?

Patrick Gruber: Well, one of them is that there's a ton of hype out there. Everyone is saying they can do all these miracle things but when you dig down into it, you find out the truth - that you need a sustainable raw material supply, converting technologies that are proven to work and you have to make products that can actually be certified as a jet fuel and be blended into existing systems and work! It's really not that easy to do and there's only a few technologies that can even accomplish this. It all takes time to sort out. In the long run it's going to take several solutions to solve the pollution problem associated with jet fuel and lots of different raw materials and technologies deployed on a massive scale over time.

One of the main issues is that we have to build out the infrastructure. When I say infrastructure, I'm referring to the whole industry. The need for production facilities for example, in order to meet the growing renewable jet fuel needs. This means that you have to have off-take agreements in place. Avfuel is leading by stepping up and buying product now as well as committing to buy product from a big plant once we build it out. That's good. That's a courageous kind of decision and has put them in a leadership position within the industry.

It's very important getting people used to the idea that it actually works, the technologies

work, the product works, the costs can come into line and be competitive with petro-jet in the long run. Our goal is getting people to understand that these technologies are worth betting on, and you've got to have people who want to play that game with you. That's not for the faint-hearted. You have to have the people who want to lead. Avfuel is one of them.

Shawn Severson: Keith, from your perspective, what do you see as the main hurdles to widespread commercialization and solution?

Keith Sawyer: Well, I certainly agree with Pat, and I think another component of why Avfuel views Gevo as a strong partner is because their focus is dedicated on SAJF versus the distractions with some of the other potential manufacturers who plan to produce a variety of bio fuels. I think the key components or hurdles in the future are going to be 1) the commercial availability, and then 2) how do you drive the blended product costs and knowledge to a level where it's accepted, and people see the value once you reach commercial availability?

Additionally, there'll be the logistics associated with the blending and the distribution, which is going to be a challenge in itself. These are the key components that we see: commercial availability, a drive toward parity in price, a drive toward better education so that people can understand the impact of their carbon footprint when they use sustainable alternative jet fuel, and then the associated blending and logistics of the product itself.

We can overcome all of the hurdles mentioned above, it's just a process that's going to take some time. As Pat mentioned earlier, you need to stay the course, stay under the hype, and continue to advance and prove that these challenges can be overcome.

Shawn Severson: Thank you, gentlemen. It certainly sounds like an exciting opportunity for both companies and we look forward to following the progress of this.

Patrick Gruber: Thank you.

Keith Sawyer: Thank you, Shawn.

SHAWN SEVERSON
FOUNDER AND CEO

Mr. Severson founded *alpha*DIRECT Advisors, a division of EnergyTech Investor, LLC, in 2016 after seeing a significant communication and information gap developing between companies and the financial community. Mr. Severson has over 20 years of experience as a senior research analyst covering the technology and cleantech industries. Previously, he was Managing Director at the Blueshirt Group where he was the head of the Energy, Environmental and Industrial Technologies practice. Prior to the Blueshirt Group, Mr. Severson was at JMP Securities where he was a Senior Equity Research Analyst and Managing Director of the firm's Energy, Environmental & Industrial Technologies research team. Before joining JMP, he held senior positions at ThinkEquity, Robert W. Baird (London) and Raymond James. He began his career as an Equity Research Associate at Kemper Securities. He was frequently ranked as a top research analyst including one of the Wall Street Journal's "Best on the Street" stock pickers and multiple awards as Starmine's top three stock pickers.

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