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SPIBER RAISES \$220M FOR IOWA PRODUCTION PLANT

THINKSOUND'S BIOBASED HEADPHONES

FORMO'S CHEESE WITHOUT THE COW

THE MYCELIUM GRILL

AMYRIS TRANSFORMS ESG REPORTING INTO NARRATIVE FOR OUR TIMES

SOLUGEN AND THE PURSUIT OF THE CARBON NEGATIVE CHEMICAL

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ON THE COVER:

The biobased *Men's Tre Runner*, from Allbirds

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IOWA[®]
economic development

3 CIRCULAR BREAKTHROUGHS OF THE WEEK

By Rebecca Coons

1

Living coffins made of mycelium and moss have been so popular that the manufacturer has had to expand production. According to Living Cocoon, almost 100 people have chosen the natural coffins, which were developed by company founder Bob Hendriks, researchers from Delft University of Technology, and the Naturalis natural history museum. The coffins take 45 days to biodegrade, enabling the deceased to “become one with nature again and to enrich the soil, instead of polluting it,” Hendriks told Dutchnews.nl. Currently, the coffins cost €1,500 (\$1,771). Hendriks hopes to reduce the cost as demand rises, and to spread the concept to areas such as Germany and the US, where local materials could be used.

2

Braskem and SCG Chemicals are considering a joint venture to produce biobased ethylene for conversion into polyethylene plastic. Braskem already produces biobased PE at its facility in Triunfo, Brazil, which it sells under the tradename I'm green. If the feasibility studies are approved with mutual agreement between parties, the production facility would be located in Map Ta Phut, Rayong, Thailand.

3

A vegan slip-on sneaker from Cariuma reportedly had a waitlist of over 20,000 people ahead of its September 8 launch. Available in polka dot, leopard, and zebra prints, the lifestyle kicks are made with a bamboo upper and an outsole made of sugarcane-based ethylene vinyl acetate. Cariuma is known for its sustainable branding and avoiding manufacturing practices that are common in the “fast fashion” space. The brand also plants two trees in the rainforest for every pair. “For the Cariuma team, this launch is more than just a label on one pair of shoes, but a true statement to the industry at large – that we will continue to commit ourselves to break boundaries and innovating towards a better earth,” the company says. Sustainable footwear is forecast to grow 6.2% annually through 2026, Vegconomist reports.

Building a sustainable future together

Leaf develops fermentation solutions for industrial manufacturers seeking to reduce their environmental footprint.



leaf-lesaffre.com

A wide-angle photograph of the Golden Gate Bridge in San Francisco, taken from a high vantage point. The bridge's iconic orange-red towers and suspension cables are prominent, stretching across the frame. The bridge spans the Golden Gate Strait, with the city of San Francisco visible in the distance under a clear, light blue sky. The water is a deep blue, and a few small boats are scattered across the bay. The overall scene is bathed in the soft, warm light of late afternoon or early morning.

ABL C 2021

BRIDGE TO NET ZERO

Advanced Bioeconomy Leadership Conference • Hotel Nikko, San Francisco, October 27-29, 2021

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Innova® Element is a yeast developed specifically to increase ethanol yield without compromising operational consistency. Expand throughput by fermenting high dry solids, improve your DDGS quality with lower glycerol – all without making significant process or input changes.

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Rethink Tomorrow

novozymes 



SPIBER RAISES \$220M FOR IOWA PRODUCTION PLANT

Protein fermentation firm Spiber has raised \$220 million to help fund a previously announced production plant in Iowa. The financing was led by Carlyle. Spiber's Brewed Protein material is a biobased, biodegradable, and animal-free synthetic protein platform that can be used as substitutes for cashmere, wool, fur, leather, silk, and other animal and/or petroleum-based materials. Large-scale production is expected to begin in 2021 in Thailand, and in the US by 2023. Spiber will also have access to Carlyle's industry experience, sustainability expertise, and network with luxury brands as well as the textile and material industries. Spiber simultaneously approved an additional JPY 10 billion capital raise

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PRODUCT OF THE WEEK: THINKSOUND'S BIOBASED HEADPHONES



Eastman Chemical says its tree-based engineering bioplastics are being used in premium headphones manufactured by Ontario's thinksound. The over-ear headphones, dubbed ov21, use Eastman's Trēva™ engineering bioplastic that contains more than 40% biobased content derived from sustainably harvested trees. ov21 is available on preorder for shipping in October. "We're a company that has always had sustainability as part of our mission," says Aaron Fournier, president and founder of thinksound. "Eastman says Trēva is USDA Certified Biobased and offers excellent acoustic properties, durability, chemical resistance, and processability.

DSM IN HOOK-UP WITH MEATABLE

Cultured meat startup Meatable has entered into a joint development deal with DSM to develop lower-cost growth media. Comprised of essential nutrients such as carbohydrates, proteins, sales, vitamins and growth factors, growth media is often cited as a key barrier to widespread consumption of lab-grown meat.



No antibiotics

Our meat is pure and there are no antibiotics used in the production process.



Trees saved

Industrial farming is responsible for 15% of all GHG emissions and cattle farming is a major driver of global deforestation.

Currently, it can account for as much as 90% of production cost. "Protein is an essential part of a balanced diet and vital for good health. Yet its production has a big environmental footprint. With the world population expected to grow to 10 billion people by 2050, a wide variety of solutions for more sustainable proteins will be needed. Cultivated meat is one of those promising, innovative protein solutions in which DSM invests," Wim Klop, Vice President DSM Biotechnology Center, says in a press statement.



Water saved

It takes 1,799 gallons of water to produce just 1lb of beef.



Zero slaughter

The average Western diet comprises of over 1,000 animals in a lifetime.

"In addition to focusing on the cost-effective production of growth media, DSM and Meatable will focus on the development of meat-like taste and texture of the final product, which are important factors influencing the purchase decision of consumers."

DSM Venturing, the venture capital arm of Royal DSM, participated in Meatable's recent \$47-million Series A funding.

FORMO RAISES \$50M IN SERIES A FOR CHEESE WITHOUT THE COW



A startup producing cheese without animals has raised \$50 million in a Series A funding round. Formo uses precision fermentation to produce cheese with the same taste and texture as cheese from animals and at lower cost. It plans on using the funds to build a pilot plant, add staff, and accelerate commercialization. Formo also said it will expand its portfolio to include European favorites like mozzarella and ricotta. The financing was led by EQT Ventures, Elevat3 Capital, Lowercarbon Capital. Other participants included Lionheart Ventures, Happiness Capital, and Albert Wenger as well as existing investors Agronomics, CPT Capital, Good Seed Ventures, Grazia Equity, and M Ventures.

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THE MYCELIUM GRILL

THE LAUNCH



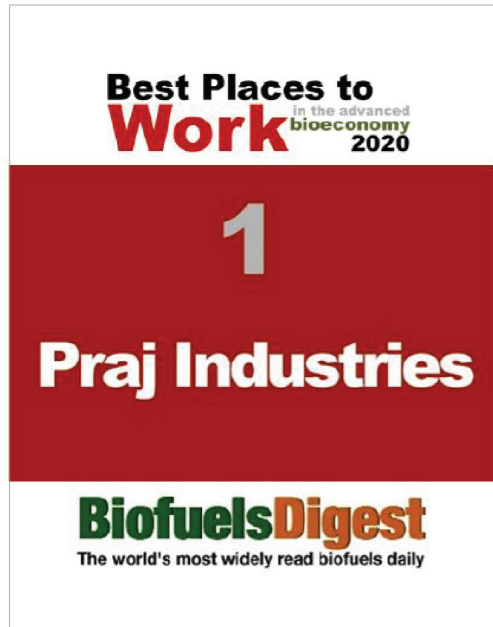
MYC

Design student Stephanie Singer has created a biodegradable grill made from mycelium and other renewable materials. Dubbed MYC, the structural elements are fireproof and actually edible—but if BBQ attendees are full from the food cooked on the grill, the entire grill biodegrades and even fertilizes the surrounding area.



“MYC consists of a bowl made of fungal mycelium, a grate made of bamboo sticks, and dried corn cobs as fuel,” Singer says. “The product is available as a compact grill kit and is protected by a minimalist cardboard cover. Dried corn cobs are used as fuel, as these are a waste product in the field in EU agriculture when growing fodder corn. As soon as the embers are ready, the bamboo sticks can easily be placed in the bulges on the side to create a grate.” Singer invented MYC as a way to reduce the aluminum waste associated with small, cheap grills that are often used once and discarded.

Globally recognized leading company in advanced bioeconomy



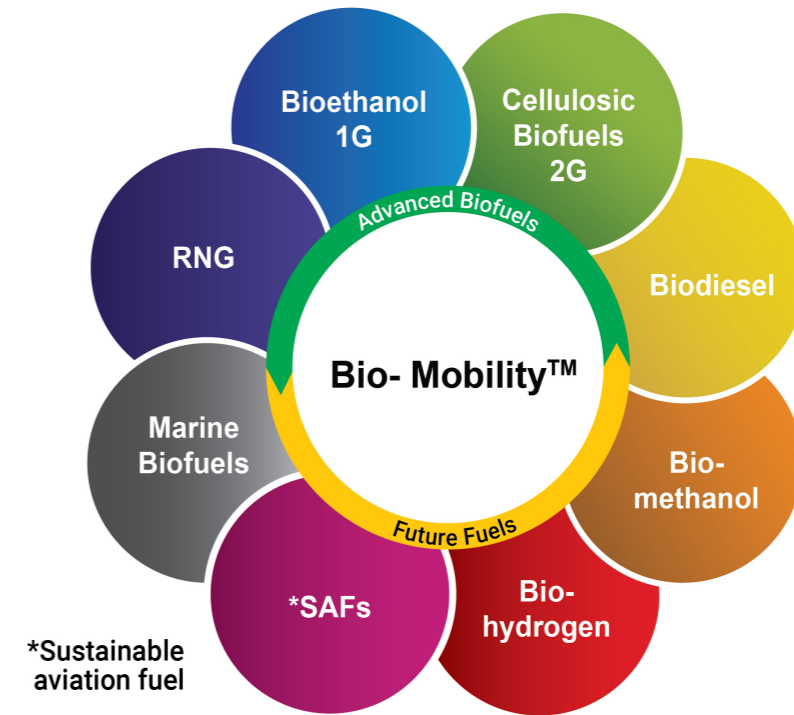
Led by a Visionary leader
Dr. Pramod Chaudhari
widely acclaimed as Ethanol Man in Industry circles



George Washington Carver Award 2020 was presented to Dr. Pramod Chaudhari during the BIO IMPACT Digital Ag & Environment Conference on September 22, 2020.

Platform of Technologies

Renewable transportation fuels



Bio-Mobility™ platform envisages utilization of Agri residues and organic waste to produce low carbon transportation fuels across all modes of mobility i.e. Surface, Air and Marine.

Portfolio of technologies

Renewable chemicals & Materials (RCM)



Bio-Prism

Nature Reimagined - Promise of Sustainability

RCM- made from carbohydrates feedstock

RCM- green & sustainable alternatives for commodity products made from hydrocarbon

RCM help reduce GHG emissions and conserve environment

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Iowa Economic Development

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Shell

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Kiewit

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ESG

ENGAGE • SUSTAIN • GALVANIZE

**ENGAGE, SUSTAIN, GALVANIZE:
AMYRIS TRANSFORMS THE ESG REPORT
INTO A NARRATIVE FOR OUR TIMES**



TODAY IT'S POSSIBLE



Decarbonize by recycling: today it's possible thanks to the **Green Circular District**, developed by NextChem, the Maire Tecnimont's company for energy transition.

The **Green Circular District** allows to produce **recycled polymers, chemical products, hydrogen and low carbon fuels**, through plastic recycling and recovering of non-recyclable waste.

The **model** is based on the integration of green chemistry technologies, as **Upcycling, chemical recycling** and the production of circular hydrogen and green hydrogen via **electrolysis**.

The **Green Circular District** brings benefits to the environment, economy and society, through decarbonization, recycling and recovery, production, employment and local economic development.



At last, a happy, vibrant, readable ESG report that has some narrative drive to it. Amyris has been “doing hard stuff:” for a long time, first technology, then scale, then brand.

Now, Amyris has taken its usual approach of turning everything on its head to find a better way, and broken through with an ESG report that redefines ESG not just as Environmental, Social, Governance, but as Engage, Satisfy, Galvanize.

A backward looking box-checking exercise becomes a narrative platform charting how a company connects its customers, products, value-chain, team, and supply-chain into a sustainable and vibrant whole. Bravo.

As Amyris CFO Han Kieftenbeld told me, “The motivation for most companies is that an ESG report is table stakes. But we didn’t want to go with the flow. We are reflecting on where we are, where our roots are, how we differentiate, and we wanted saw communication about ESG as part of a bigger communication strategy. Now is a good time.”

Maybe COVID provides an opportunity.

“The role of biological science has advanced in people’s minds because of COVID. The interest has changed, people haven’t seen vaccines produced in 9 months. The crisis created that pressure point, and now people can accept that technology is a positive. So, here’s an opportunity for communication and engagement, storytelling. On the other hand, we feel that we’re maturing, and as we grow, we have more employees, and here’s a way to put accountability back on the company. What you measure matters. How we think about science. How we put product out. How we make products in a sustainable way.

“It goes back to ‘no compromise’ about product, and starting out with values. What we do as mankind no longer acceptable, resources are not abundant, how do we come up with credible alternatives, sustainable, that have the right cost point.

Great thoughts. Let’s take a look.



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Breakthrough #1 - Create one page TOCs with chapter headings that connect to stakeholders, values and missions.



CEO LETTER

Making chemistry that is healthier for all people and our planet is at the heart of everything we do at Amyris. Since our Company was founded in 2003, our mission has been to rapidly transition the world to better performing ingredients and products that are better for people and better for the planet. Our world-leading synthetic biology platform and proprietary Lab-to-Market™ operating system provide a scalable way forward to convert basic plant sugars into the rarest and best performing natural molecules and ingredients, disrupting most markets. We take our science, technology and clean manufacturing direct to the consumer with distinctive consumer-inspired brands translating science into applications and products that are loved by consumers and that drive the transition of industry leaders to sustainable chemistry.

Consistent with our mission, we are proud to present our first Environmental, Social and Governance (ESG) Report. This report marks an important step in communicating our ESG goals and creating long-term value for our stakeholders, including our shareholders, employees, business partners, customers and local communities.

This report primarily covers our ESG activities in 2020, which was one of the most productive years in our Company's history. Our priority since the beginning of the COVID-19 pandemic has been to ensure the health and safety of our employees and the communities we operate in. This report details how we focused on this priority while maintaining business continuity and continuing the growth trajectory of our business.

We achieved record growth in our product revenues and significantly improved our financial position. We are thankful for the resilience, collaboration and innovation of our employees and partners, who worked together to support our customers with ingredients and products that would sustain their everyday health and wellbeing, during their isolation and time of need.



We expanded our portfolio of consumer brands for health, clean beauty and personal care markets that deliver on our No Compromise® promise at a time when the focus on health and wellness is more than a trend and represents a way of living and being healthy.

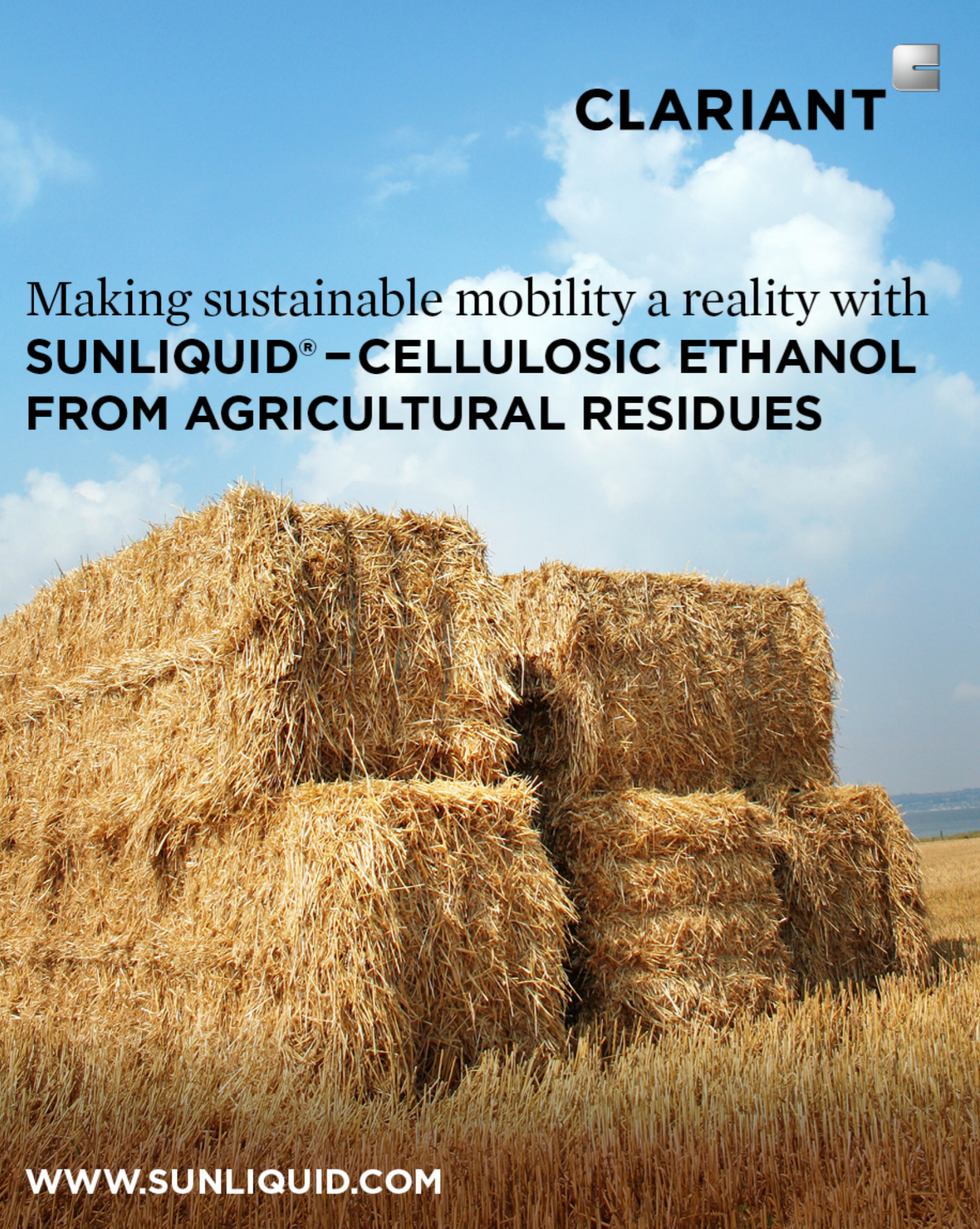
The core values of Amyris demonstrate our commitment to following responsible ESG practices that create sustainable growth for all of our stakeholders. Our success is due to the hard work of our talented and passionate team, our strong partnerships with industry leaders around the world, the loyalty and enthusiasm of our customers and the ongoing support of our shareholders. I want to thank all of our stakeholders and look forward to keeping you updated on the progress of our ESG programs with both ESG reports and regular updates on our website.

Sincerely,

John Melo
President and Chief Executive Officer

Breakthrough #2 - Walk the Walk. In the CEO letter, connect brand positions to core values and practices.





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AMYRIS' MATERIALITY-BASED APPROACH TO ESG

In 2020, we completed our first comprehensive materiality assessment to provide a foundation for our inaugural ESG report. As part of this work, Amyris retained the Governance & Accountability Institute (G&A), a highly respected advisor on ESG issues, to perform an independent third-party assessment.

From this research, G&A calculated an overall materiality score for each ESG topic to help focus our strategy and disclosures in this report. Using this quantitative model, Amyris identified the highest scoring topics as most material to the business.

The assessment began by examining a range of key stakeholders, including investors, customers, employees and ESG rating organizations, as well as studying industry peers, to conduct a materiality analysis for ESG topics. Topics included each of the Global Reporting Initiative (GRI) Standards Topics, the 17 United Nations Sustainable Development Goals (SDGs), the Sustainability Accounting Standards Board (SASB) - Chemicals Sustainability Accounting Standard, and other ESG topics of interest to investors and other important stakeholders.

We first mapped sector-specific material ESG topics identified by these stakeholders to the

CORE VALUES

Innovation

We continuously solve unsolved needs. We are driven to accomplish the seemingly impossible. We embrace intelligent risk and are a learning organization.

Collaboration

We work with each other, our partners and our customers to achieve exceptional results. We value, respect and learn from each other

UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS

SDG	AMYRIS ACTIVITIES
 <p>Good Health and Well-Being Ensure healthy lives and promote well-being for all at all ages</p>	<ul style="list-style-type: none"> Develop new molecules to expand our portfolio of sustainable ingredients made with clean chemistry Focus on creating healthier ingredients and products — spanning the health, nutrition, wellness, beauty and flavors and fragrances space — that positively affect health inside and out
 <p>Responsible Consumption and Production Ensure sustainable consumption and production patterns</p>	<ul style="list-style-type: none"> The environmental footprint of our proprietary Lab-to-Market operating system, fermentation and manufacturing process of many of our ingredients is reduced compared to conventional production systems that rely on destructive and non sustainable practices, additional land use and even wildlife Embrace a culture of sustainability throughout the organization while educating consumers about the use of clean chemistry and products that reduce environmental impacts and are good for people and the planet

Breakthrough #3 - Connect the dots. In the opening pages, connect your approach to the standards and measures that everyone knows about, such as US standards.



amyris 2020 Inaugural ESG Report

- 1
- 2
- 3

Protecting People and the Planet



Breakthrough #4 - Don't Just tell Me. Show Me.. Use faces of real people, not models, and if your lab lighting reflects your logo colors, so much the better.



Commercializing molecules into sustainable ingredients

Our sustainable ingredients are included in over

20K PRODUCTS

Global consumers reached

200M

Commercialized molecules and molecules in active development

31



Breakthrough #5 - The Tale of the Tape. Pair narrative to real-world data, transparently gathered, simply presented, and no cherry picking please.



When the future is at stake, promises are not enough

For over 80 years, Haldor Topsoe has been at the forefront of energy-efficient technologies, and now we are setting our sights on becoming the world leader in carbon-reduction technology by 2024.

As the world's need for renewables increases, we are working with producers who share our vision for green energy – and our understanding of how to realize it. From proven solutions to emerging technologies, our goal is always the same: progress for our customers, their customers, and the planet.

After all, progress is all that counts on the path to a sustainable future.

Learn more at www.topsoe.com

Producing Highly Pure Molecules with Clean Chemistry

Using our proprietary Lab-to-Market operating system for clean chemistry, Amyris engineers the genetics of yeast strains and then ferments the yeast in sugarcane syrup to convert basic plant sugars into molecules that can be used as clean, sustainable ingredients for consumer products. We continue to improve our Lab-to-Market speed to identify and commercialize new molecules; our first commercial ingredient took about 40 months from yeast strain to pilot plant run, and today we average less than 12 months. This has resulted in a 90 percent reduction in the cost of product development and an 80 percent reduction in time-to-market for new products.

By the end of 2020, Amyris had commercialized 13 molecules, with 18 additional molecules in active development and 10 more in the

discovery phase. We expect to add at least eight new molecules to our active development pipeline in 2021. The molecules and ingredients we develop serve as the foundation of our consumer brands.

The three, Amyris-owned consumer brands all include products made with our sustainable ingredients as building blocks – Biossance® clean beauty skincare, Pipette® clean baby skincare and Purecane™, a zero-calorie sweetener naturally derived from sugarcane. Two that we acquired in 2020 will convert to Amyris ingredients over time: Terasana® specialty skincare and Costa Brazil™ luxury skincare. Two new brands will launch in 2021 using Amyris' hero ingredients: Rose, Inc.™ color cosmetics and JVN™ haircare.

OUR SUSTAINABLE CONSUMER BRANDS

BIOSSANCE®.

clean beauty skincare


pipette™

clean baby skincare



a zero-calorie sweetener naturally derived from sugarcane

We commercialize our molecules into specialty ingredients, and with our partners we produce and distribute the ingredients for use in large addressable markets, including Clean Beauty, Health & Wellness and Flavors & Fragrances.



Breakthrough #6- Pride in Product. Customers know you for products. Get them into the story early, and connect your values proposition to their value proposition with simple declarative statements, and show the logo, please.

Amyris received a World Food Innovation Award in 2019 for the development of its Reb M sweetener. Since then, Purecane has earned a number of prestigious distinctions including a 2020 "Best of What's New Award" from Popular Science magazine.

Our Clean Beauty brands ban over 2,000 ingredients from their formulations including more than 1,300 ingredients restricted by the European Union, and many ingredients on the Environmental Working Group (EWG) restricted list. EWG is a non-profit watchdog organization that reviews and verifies product formulas for chemical toxicity, focusing on environmental and public health concerns. To receive EWG VERIFIED™ status for use on product labels and in marketing, the product must pass EWG's rigorous licensing criteria including providing laboratory test results showing that ingredients and products meet relevant EWG contamination

restrictions and pass basic microbial challenge tests. EWG-licensed companies must also follow a Good Manufacturing Practice program in line with that recommended by the U.S. FDA's Guidance for Industry: Cosmetic Good Manufacturing Practices.

All of our Biossance products are EWG VERIFIED and the majority of our Pipette products are verified with the exception of a limited number of products that the EWG does not currently verify as part of its program. Our Pipette Eczema Lotion, Cream to Powder and Baby Balm have the National Eczema Association (NEA) Seal of Acceptance™, which follows strict criteria including evaluation by the NEA's review panel of doctors of the product's ingredients and formulation data and testing data on sensitivity.

Breakthrough #7 - Trust but Verify. You make it safe, why not say so, and say who verifies that and which standards you adhere to.

INGREDIENT SAFETY



INGREDIENT RECOGNITIONS





amyris 2020 Inaugural ESG Report

In addition to the product reviews by EWG and the NEA, all of our Clean Beauty ingredients are tested for safety and efficacy by third-party clinical testing labs to ensure that they meet appropriate standards for cosmetic or food safety. Amyris is also committed to offering products without the use of Biossance and Pipette certified, Leaping Bunny certified, and our commitment to offering cruelty-free products and complying with requirements beyond current laws.

Educating Customers on Sustainable Ingredients

Amyris is an active participant in industry groups involved in educating consumers about scientific advances made to improve people's health and the planet. Our President and Chief Officer John Melo, is a board member of the Biotechnology Innovation Organization and is on BIO's Industrial & Section Governing Board. He is also an advocacy group in the US, focused on biotechnology and the role of science and protecting our environment. Our organization and other industry executives engage regularly on a number of industry issues and educate at state and federal levels.

Amyris and its consumer brands are committed to educating consumers on sustainable ingredients in the Health & Wellness and Flavor & Fragrance markets. In 2019, our Biossance brand launched [The Clean Academy](#), a comprehensive educational

In 2019, our Biossance clean beauty brand launched [The Clean Academy](#), a comprehensive educational program utilizing an interactive curriculum, engaging video content, experiential events and a passionate community of industry experts.

an interactive curriculum of engaging video content, experiential events and a passionate community of industry experts. The Clean Academy provides in-depth information about labels and ingredients, including a Skincare

amyris 2020 Inaugural ESG Report

Lowering the carbon footprint of our operations

90% Hazardous waste produced in our Emeryville laboratory facilities is recycled or burned to produce energy

300 METRIC TONS Isopropyl alcohol (IPA) recycled from our Laboratory Assurance and Customer Service teams.

30 METRIC TONS Of carbon emissions offset by purchasing carbon credits through our partnership with Carbon

THE BEAUTY INC AWARDS 2019



Breakthrough #8 - It Tain't What You Do, It's The Way That You Do It. Connect brands and products to manufacturing process and back to core values, and everyone will thank you if you have 2-3 quick factoids to summarize the narrative.

Through multi-specialist integrated offers, we deliver ever more inventive and sustainable solutions to our industrial clients, always aiming at preserving the planet. www.axens.net



Reducing our Carbon Footprint

Amyris is committed to mitigating the environmental impact of our business by taking action to lower the carbon footprint of our operations and reduce our requirements for energy and natural resources. This includes our offices, and laboratory and manufacturing facility operations, as well as sourcing of raw materials and packaging and shipping of our consumer products.

Amyris' corporate headquarters in Emeryville, California is located in EmeryStation East, a LEED Silver-certified building that includes four on-site co-generation power units. The power produced by these units, relative to the amount of power from the local utility, is equivalent to taking 719 cars off the road annually. In addition, we have building automation systems that reduce the use of energy for lighting and cooling in our office space.

Our laboratory in Emeryville is a Platinum Level Certified Lab through My Green Lab, a platform

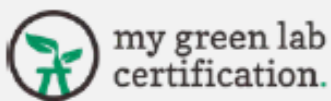
recognized for outstanding work in reducing the environmental impact of lab operations. We have implemented programs to reduce the electricity used in our lab operations, including energy assessments on our equipment, replacing older freezers with newer EnergyStar rated models and adjusting processes to reduce energy through raising feasible temperatures for storage.

The primary raw material we use to develop our ingredients is sugarcane, a rapidly renewable crop. We partner with Raízen, one of the world's largest sugarcane producers, to provide the sugarcane feedstock used in our fermentation process. In 2020, Amyris became a member of Bonsucro and received their Chain of Custody Certification. Bonsucro is a global organization that promotes sustainable sugarcane production, which ensures that the Brazilian sugarcane we use is sustainably and ethically produced and processed. To achieve certification, Amyris met stringent guidelines in social responsibility and sustainable practices. For the sugarcane producer, the certification

Breakthrough #9 - 2-4-6-8-Validate! Lots of third-party organizations out there to validate and certify what you are doing and connect you to global standards that are valued by the broader stakeholders such as communities, civil society. You're awesome...report it with pride!



ECO-CERTIFICATIONS



Our laboratory in Emeryville is a Platinum Level Certified Lab through My Green Lab, a platform recognized for outstanding work in reducing the environmental impact of lab operations.



Amyris became a member of Bonsucro and received their Chain of Custody Certification.



Amyris' corporate headquarters in Emeryville, California is located in EmeryStation East, a LEED Silver-certified building that includes four on-site co-generation power units.



Breakthrough #10 - Some of your Organisms are People. Show people who are happy not just because of the mission and the pay, but because to connect values to habits, habits to actions, and your actions make their lives better.



Protecting Employee Health, Wellness and Financial Security

In 2020, our comprehensive benefits packages included 90% employer-paid medical, dental and vision insurance premiums for employees and their dependents. Employees are able to choose from various providers depending on their location. We provide Flexible Spending Accounts (FSAs) including medical FSAs and dependent care spending accounts for childcare and elder care expenses. Amyris also provides all employees with life insurance, short-term and long-term disability insurance, accident and critical illness insurance and access to an Employee Assistance Program.

We encourage the wellbeing of our employees by offering a gym membership subsidy program, as well as free access to the on-site fitness center at our Emeryville headquarters. In addition, we provide generous vacation and paid time off for employees, including three paid volunteer days, 16 weeks of paid parental leave and a sabbatical program.

Amyris offers a variety of programs to help support employees as they plan and save for the future. These programs include a 401(k) retirement savings plan with a discretionary company match and an employee stock purchase plan. Amyris also grants equity awards to employees as determined by the Board's Leadership, Development, Inclusion and Compensation Committee or the company's Executive Leadership Team.



In 2020, our comprehensive benefits packages included 90% employer-paid medical, dental and vision insurance premiums for employees and their dependents.

Breakthrough #11 - Wear the T-Shirt. People who do interesting stuff together outside of the office will do interesting stuff together in the office. And, you'd be surprised how many people want to work at a company that "looks like me".



Our commitment to diversity, equity and inclusion

<p>50%</p> <p>Percent of our total workforce are women</p>	<p>33%</p> <p>Percent increase in Black representation in our workforce in 2020</p>
<p>\$180K</p> <p>We pledged to donate \$100,000 to the United Negro College Fund</p>	

THE WEEKLY CIRCULAR 49

Working to Fight Infectious Diseases

Amyris was founded in 2003 by a group of scientists from the University of California, Berkeley. In 2004, through a grant from the Bill & Melinda Gates Foundation, we developed technology to create microbial yeast strains that produce artemisinic acid, a precursor of artemisinin used in artemisinin combination therapies (ACT) to treat malaria. This technology was licensed to Sanofi on a royalty-free basis and approximately 120 million ACT treatments were delivered to help fight malaria worldwide. We are continuing to work with the Gates Foundation to develop additional yeast strains that produce ACT treatments at a low cost.

Our work on combating infectious diseases continued in 2020 with the signing of a collaborative agreement and exclusive license with the Infectious Disease Research Institute (IDRI), a medical research organization, to advance a novel ribonucleic acid (RNA) vaccine platform for use in future vaccines for COVID-19 and certain other viruses. Pre-clinical studies of the Amyris/IDRI RNA vaccine platform have been promising and the project is expected to move to Phase 1 clinical trials. The Amyris/IDRI platform is expected to offer manufacturing,

storage, and distribution advantages for the use and development of future vaccines. The Amyris/IDRI platform's manufacturing process is designed with a well-established oil-in-water emulsion technology that is already used in commercialized vaccines. In addition, the use of the Amyris/IDRI RNA platform would result in a vaccine that can be stored for a protracted period at refrigerator temperatures and for several months at room temperature, increasing the potential to significantly improve distribution of pandemic response vaccines in low-resource settings.

The work on the RNA vaccine platform builds on another collaboration between Amyris and IDRI under a \$4.4 million, five-year grant received by IDRI in 2019 from the National Institute of Allergy and Infectious Diseases (part of the U.S. National Institutes of Health) to develop sustainable alternatives to shark squalene for use in vaccine adjuvants. Squalene is an important component in many adjuvants, which help boost the efficacy of vaccines. Amyris has produced highly effective squalene from sugarcane as a replacement for shark-derived squalene, offering a sustainable, affordable and rapidly scalable alternative that offsets the killing of sharks and supports ocean biodiversity.

GRANT AND PARTNERSHIPS



We developed technology to create microbial yeast strains that produce artemisinic acid, a precursor of artemisinin used in artemisinin combination therapies (ACT) to treat malaria.



We signed a collaborative agreement and exclusive license with IDRI to advance a novel ribonucleic acid (RNA) vaccine platform for use in future vaccines for COVID-19 and other viruses.



Through IDRI, we worked with The National Institute of Allergy and Infectious Diseases (part of the U.S. National Institutes of Health) to develop sustainable alternatives to shark squalene for use in vaccine adjuvants.

1
2
3
Malinao Life Partner

Breakthrough #12 - Be a Friend. No one does technology alone - mention your friends, celebrate your friendship, they might not have heard of you but they've heard of your friends. Did you know that one in three American's met their spouse through a friend? Friends matter!



Our commitment to diversity, equity and inclusion

50%

Percent of our total workforce are women

33%

Percent increase in Black representation in our workforce in 2020

\$180K

We pledged to donate \$100,000 to the United Negro College Fund

MANAGING ENTERPRISE RISKS

Amyris recognizes the importance of managing risks in our business, including operational risks such as business continuity, reputational risk, compliance risk, and technology risks involving information security and protection of intellectual property. The Board as a whole oversees our risk management systems and processes, with each committee having oversight of certain categories of risk. At the management level, the Risk Management function is overseen by the Chief Financial Officer, who reports to the Board's Audit Committee on a regular basis.

We protect the inventions that are important to the development and conduct of our business.

695

Issued U.S. and foreign patents

220

Pending U.S. and foreign patents

9

Breakthrough #13 - Be a Steward. People who look after precious resources as if they are the most important thing in the world? Guess what, that's sustainability.



We are committed to respecting and protecting the privacy of the personal information entrusted to us by our customers.

Breakthrough #14 - Play Well with Others. Data is a tool, data is a weapon, and at the end of the day, not all the data you can obtain is really yours. Give respect, and you'll find that givers gain.



SOCIAL

Employee breakdown by employment category (percentage)



Severity rate (incidents per 200,000 hours worked)

	2019	2020
Emeryville	0.5	0.0
Leland	0.0	0.0
Campinas	0.0	1.0

Fatality rate (incidents per 200,000 hours worked)

	2018	2019	2020
Ratio	0	0	0

On-site COVID-19 cases⁵

	2020
Emeryville	1 (+ 2 contractors)
Leland	1

Percentage of products that contain GHS Category 1 and 2 substances⁶

	2020
Ratio	0.33

Gender pay ratio

	2020
Men:Women	10:1

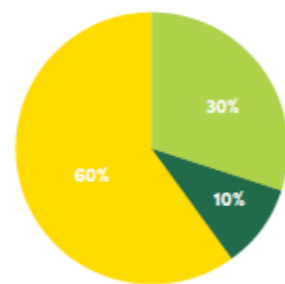
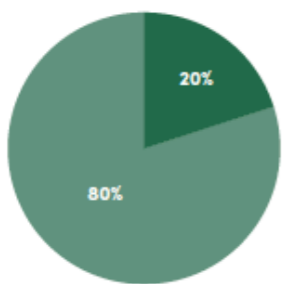
Number of reported incidents of discrimination

	2020
Number	0

⁵: There were no reported cases of on-site transmission
⁶: Of Pipette and Biossance products

GOVERNANCE

Diversity of Board of Directors



Number of independent directors

	2018	2019	2020
Number of directors	9	8	8

Breakthrough #15 - The Devil is in the Details, or is it God is in the Details? Either way you see it, powerful forces that might control the weather are in the details. Include a lot of them, in the back, “keep it simple, stupid”, and you’ll find that transparent disclosure is the key to riches, disclose with joy, because after all, in the end you will disclose all of it to someone, and some of it to everyone, so leave stealth to Bernie Madoff.



GRI Standard	Disclosure	Report Location	SDG
	Governance		
	102-18 Governance structure	Chapter 7: Upholding Effective Corporate Governance, pages 46-50 Board of Directors Webpage	
	102-20 Executive-level responsibility for economic, environmental, and social topics	Chapter 7: Upholding Effective Corporate Governance, pages 46-50	
	102-22 Composition of the highest governance body and its committees	Chapter 7: Upholding Effective Corporate Governance, pages 47-48 Board of Directors Webpage Committee Composition Webpage	#5 Gender Equality #16 Peace, Justice, & Strong Institutions
	102-23 Chair of the highest governance body	2021 Proxy Statement , Board Leadership Structure, page 25-26	#16 Peace, Justice, & Strong Institutions
	102-24 Nominating and selecting the highest governance body	Amended and Restated Nominating and Governance Committee Charter	#5 Gender Equality #16 Peace, Justice, & Strong Institutions
	102-25 Conflicts of interest	Amended and Restated Nominating and Governance Committee Charter	#16 Peace, Justice, & Strong Institutions
	102-26 Role of highest governance body in setting purpose, values, and strategy	Amended and Restated Nominating and Governance Committee Charter	
	102-27 Collective knowledge of highest governance body	2021 Proxy Statement , Board Biographies, pages 17-22 2021 Proxy Statement , Board Skills and Diversity, page 25	
	102-28 Evaluating the highest governance body's performance	Amended and Restated Nominating and Governance Committee Charter	
	102-29 Identifying and managing economic, environmental, and social impacts	Amended and Restated Nominating and Governance Committee Charter Amended and Restated Leadership, Development, Inclusion, and Compensation Committee Charter	#16 Peace, Justice, & Strong Institutions
	102-30 Effectiveness of risk management processes	Chapter 9: Managing Enterprise Risks, pages 54-58	
	102-31 Review of economic, environmental, and social topics	Chapter 7: Upholding Effective Corporate Governance, pages 48-49	
	102-35 Remuneration policies	2021 Proxy Statement , Executive Compensation, pages 41 - 59 Amended and Restated Leadership, Development, Inclusion, and Compensation Committee Charter	
	102-36 Process for determining remuneration	2021 Proxy Statement , Executive Compensation, pages 41 - 59 Amended and Restated Leadership, Development, Inclusion, and Compensation Committee Charter	
	102-37 Stakeholders' involvement in remuneration	2021 Proxy Statement , Executive Compensation, pages 41 - 59	#16 Peace, Justice, & Strong Institutions
	102-38 Annual total compensation ratio	2021 Proxy Statement , Executive Compensation, pages 41 - 59	
	102-39 Percentage increase in annual total compensation ratio	2021 Proxy Statement , Executive Compensation, pages 50 - 67 2021 Proxy Statement , Executive Compensation, pages 41 - 59	

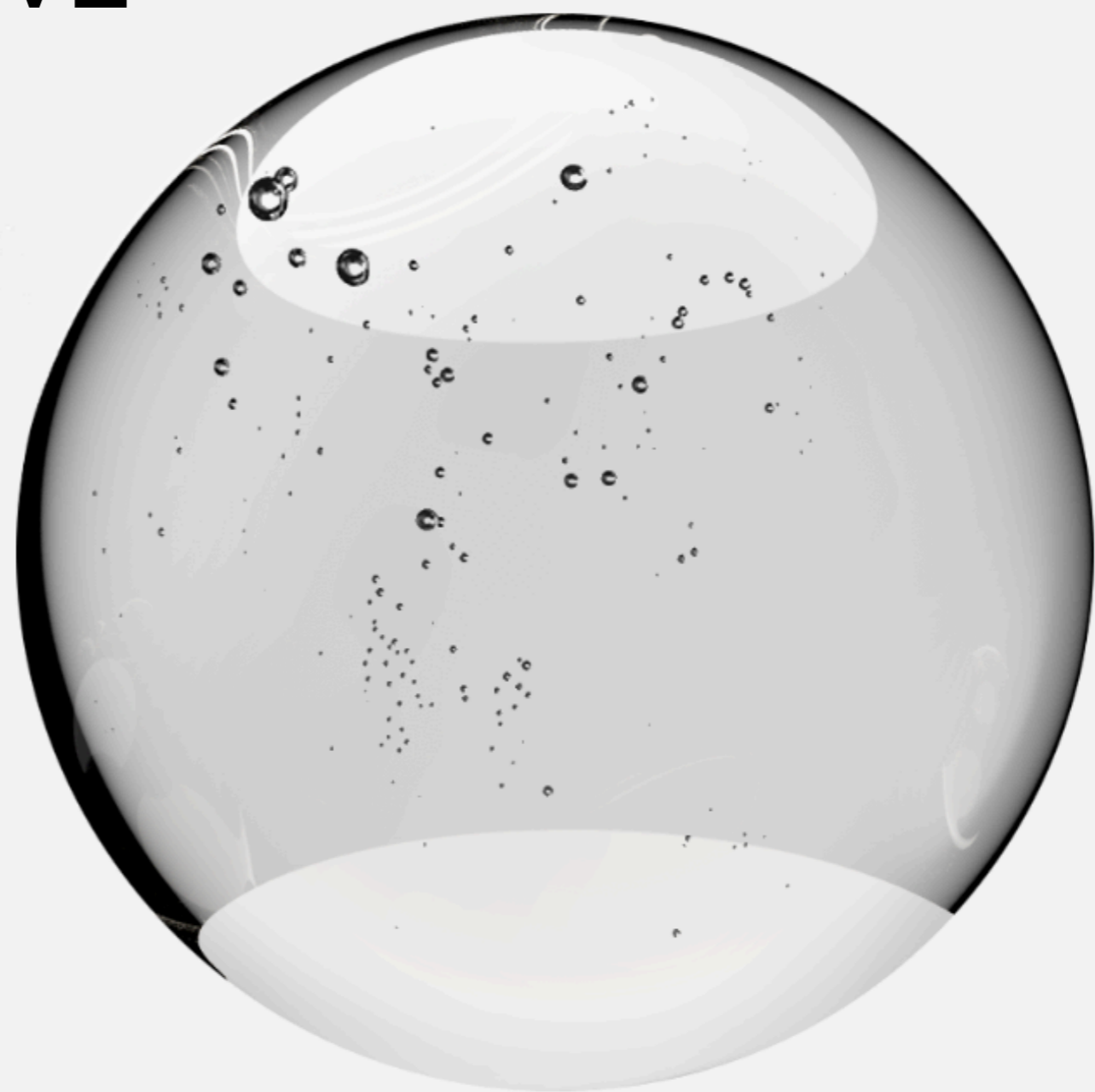
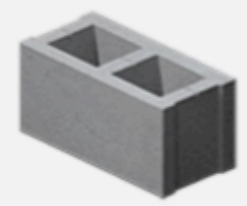
GRI 102: General Disclosures 2016

Breakthrough #16 - First I want to Know You, then I'll give you my Mobile Number. First things, first. The narrative is mission #1, build awareness, trust, and complete that task. Then hand off your reader to everyone else's website, design and narrative style, for the vital purpose of Validation and Further Reading.

Links are lovely, yet Validation is Mission #2. Doing both at the same time, that's Mission Impossible.



SOLUGEN AND THE PURSUIT OF THE CARBON NEGATIVE CHEMICAL

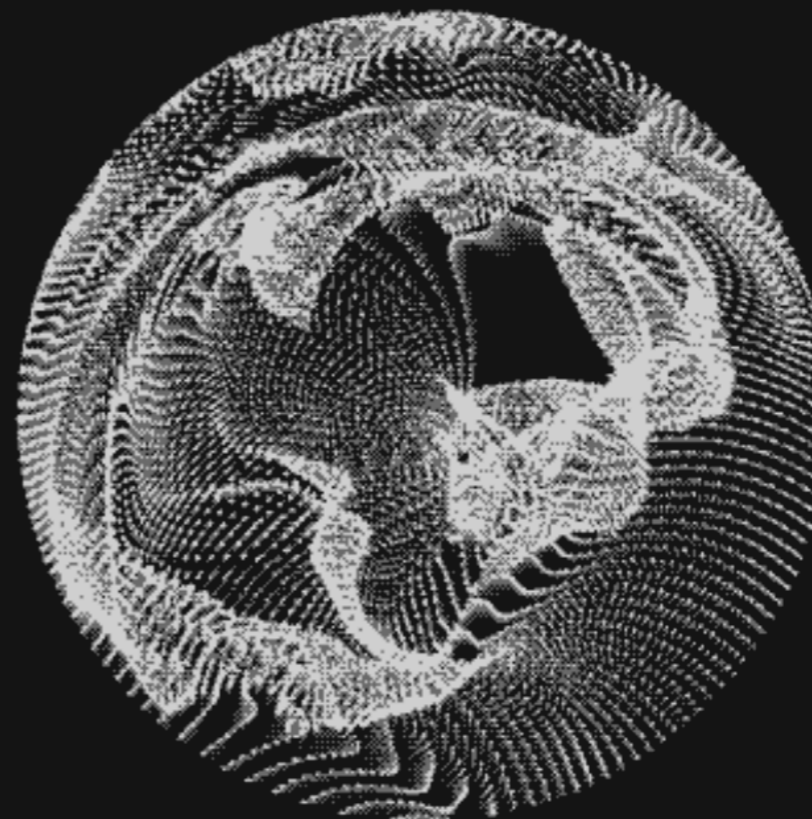


By Helena Tavares Kennedy

News is now in from Texas, Solugen, a company decarbonizing the chemicals industry, announced a Series C financing round of over \$350 million. Solugen's patented Bioforge processes produce chemicals from bio-based feedstocks and are based on breakthroughs in synthetic biology, metal catalyst engineering, and modular plant design. In today's Digest, the funding, who's behind it, the tech, reactions, and more.

What they do

Solugen is addressing one of the biggest climate problems facing the international community, emissions from chemical production, which the IEA estimates accounted for 880 million tons of CO2 in 2018 and was the third largest source of global CO2 emissions. Solugen's patented Bioforge processes produce chemicals from bio-based feedstocks and are based on breakthroughs in synthetic biology, metal catalyst engineering, and modular plant design. The company's green products are cost competitive and also drastically reduce or eliminate emissions. Solugen is a platform chemistry company, and the company's solutions will also address clean water, sustainable materials, safer food, and healthy personal care.



The first carbon *negative* molecule factory that can scale to meet the world's needs.

Massively scales

Using proprietary engineered enzymes, Solugen scales synthetic biology quickly and efficiently. Fermentation and costly immobilization are not required.

Safe and natural

We use safe feedstocks such as sugars, air, and carbon dioxide.

Zero emissions

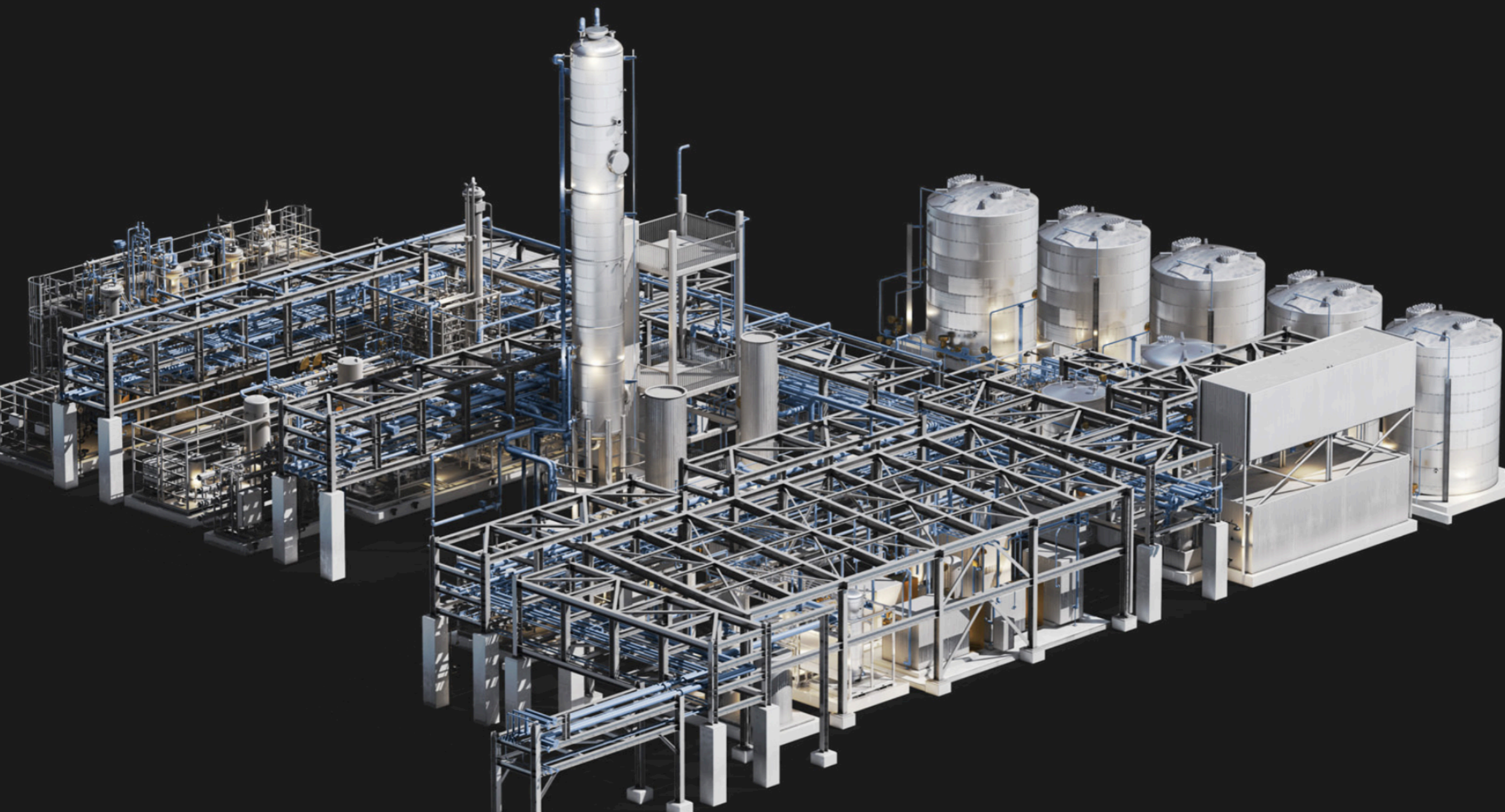
No air emissions, no wastewater emissions.

Scales faster

Solugen goes from 0.0004L well plates to its 40,000L enzymatic reactor in months, not decades.

Cost efficient

Feedstock yield losses are the most expensive part of a traditional thermochemical or fermentation manufacturing process. The Bioforge platform enables 1 ton of feedstock to produce 1 ton of product.

**The funding**

The latest round of funding will be used to expand Solugen's Bioforge technology platform, which is used to produce lower-carbon and carbon-negative chemicals & materials for its key customers, and to expand the reach of Solugen's product portfolio. According to their press release, through its Bioforge platform, Solugen has the potential to address a significant portion of the chemical products on the market today as well as introduce novel, bio-advantaged products.

Who's behind it?

GIC and Baillie Gifford led the round with participation from Temasek Holdings, funds and accounts managed by BlackRock, Carbon Direct Capital Management, Refactor Capital, and Fifty Years. BofA Securities, Inc. acted as sole placement agent on this transaction.

Reactions from the stakeholders

"Our breakthroughs in enzyme and metal catalyst engineering allow us to produce chemicals in a more sustainable and profitable way," said Dr. Gaurab Chakrabarti, CEO and co-founder of Solugen. "We can now deliver for our customers performance benefits, cost savings, and most importantly, lower carbon footprints."

"This fundraising round allows us to continue expanding the footprint of our Bioforge technology to give industries the products they need to reduce emissions in their existing supply chains, without compromising on performance or economics," said Solugen co-founder and Chief Technology Officer Dr. Sean Hunt.

Kirsty Gibson, investment manager at Baillie Gifford said: "Solugen's vision for cleaner chemicals through synthetic biology has the potential to be a fundamental shift in how chemicals are made, to help tackle the environmental challenges we face globally. The chemical market itself is colossal and Solugen is just getting started. Our investment on behalf of clients will help the company execute on this vision and scale its operations."

"Carbon dioxide from chemical production is a top three contributor to industrial greenhouse gas emissions," said Jonathan Goldberg, CEO of Carbon Direct. "Carbon Direct's mission is to help scale impactful carbon management technologies that will commercially scale. Solugen's critical breakthrough is delivering lower and potentially carbon negative solutions that are cost competitive to the market today. We are pleased to support Gaurab, Sean, and the Solugen team as they continue to decarbonize the chemicals industry."

The Bottom Line

If you recall back in 2018, The Digest reported that AkzoNobel Specialty Chemicals named 10 start-ups and chemical researchers as winners of the AkzoNobel Specialty Chemicals' Imagine Chemistry challenge – and Solugen was one of those 10 for their green process to make hydrogen peroxide that has the potential to replace technology that has remained unchanged since the 1930s. Solugen was the world's first and only producer of bio-based peroxide solutions, as reported in The Digest in May 2019. So keep an eye out on them as this latest round of funding is sure to allow Solugen to decarbonize some of the largest carbon emitting segments of our modern economy.



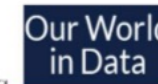
GAINING PERSPECTIVE

It's the burning of fossil carbon to make electricity, to heat buildings and production processes, and for transportation that generates the vast majority of GHG emissions

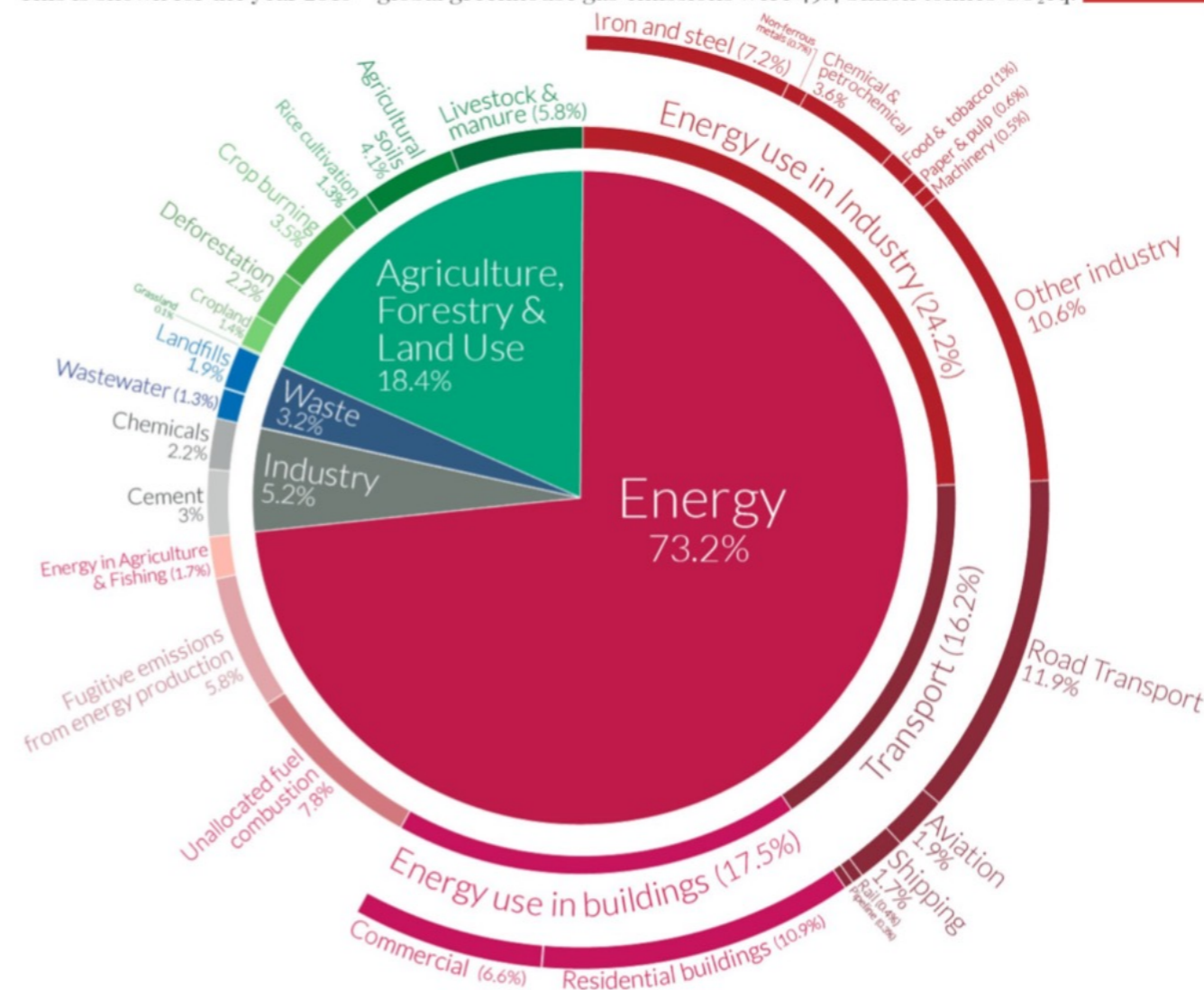
Electricity demand is going to go up:

- **30% of people in the world don't have access to electricity**
- **Demand in transportation sector will increase**

Global greenhouse gas emissions by sector



This is shown for the year 2016 – global greenhouse gas emissions were 49.4 billion tonnes CO₂eq.



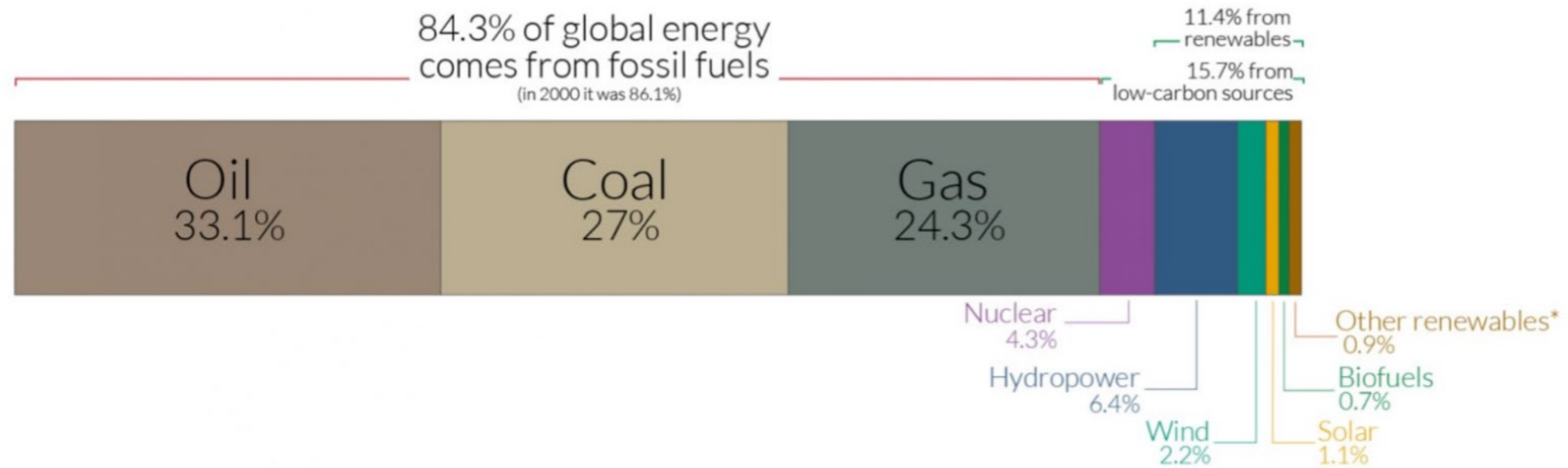
OurWorldinData.org – Research and data to make progress against the world's largest problems. Source: Climate Watch, the World Resources Institute (2020). Licensed under CC-BY by the author Hannah Ritchie. (2020).

GAINING PERSPECTIVE

Global primary energy consumption by source



The breakdown of primary energy is shown based on the 'substitution' method which takes account of inefficiencies in energy production from fossil fuels. This is based on global energy for 2019



*'Other renewables' includes geothermal, biomass, wave and tidal. It does not include traditional biomass which can be a key energy source in lower income settings.

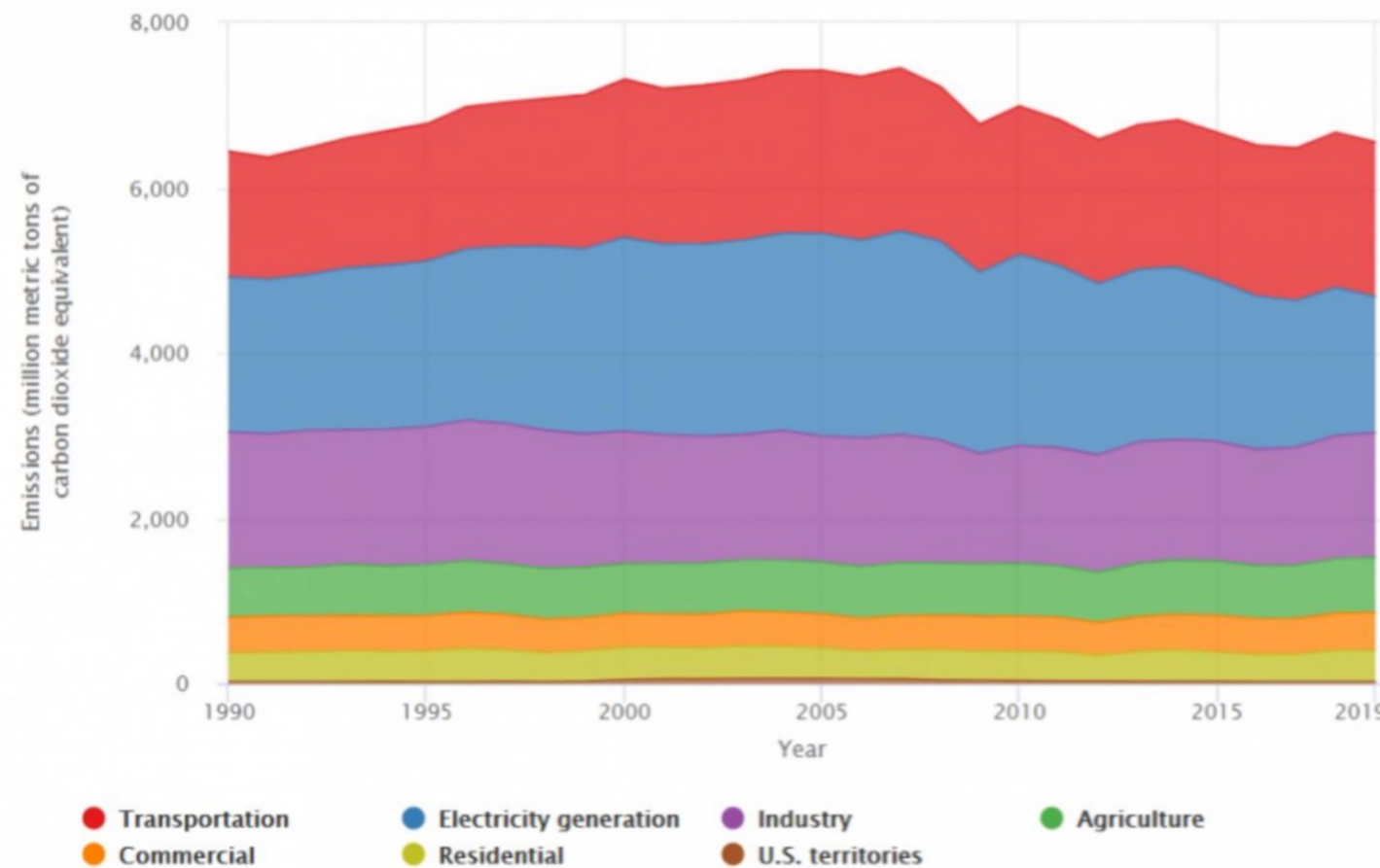
OurWorldinData.org - Research and data to make progress against the world's largest problems.

Source: Our World in Data based on BP Statistical Review of World Energy (2020)

Licensed under CC-BY by the author Hannah Ritchie.

IN THE US: ELECTRICITY, TRANSPORTATION, AND INDUSTRY NEED TO BE PRIMARY TARGETS FOR GHG REDUCTION—**WE NEED TO REPOWER (FASTER)**

U.S. Greenhouse Gas Emissions by Economic Sector, 1990–2019



Can be eliminated with renewable energy (electricity, green hydrogen, RNG and hydrocarbons)

Can be eliminated with wind, solar, CHP of renewables like RNG, (and nuclear?)

50% of this Industry GHG's is due to burning fossil fuel. Can be eliminated with renewable energy

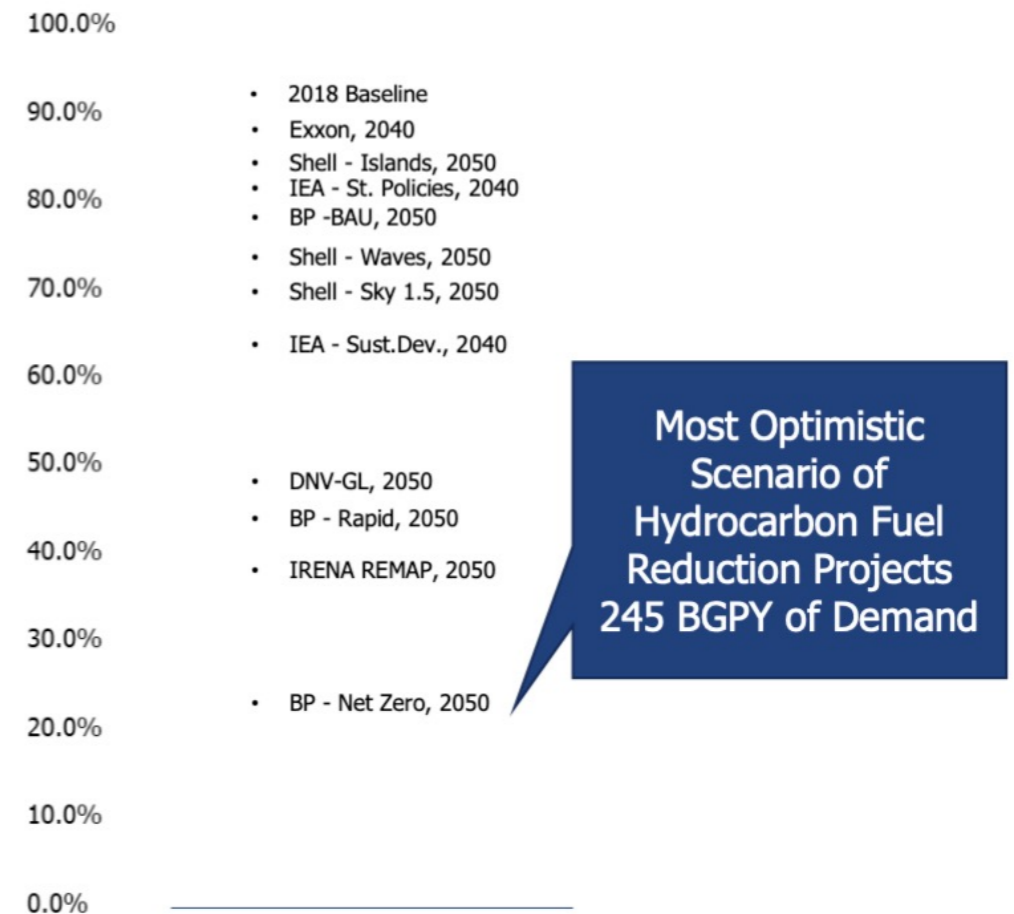
Source: U.S. EPA's Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2019. <https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks>

TRANSPORTATION SECTOR: EVEN IN THE MOST OPTIMISTIC ELECTRIC VEHICLE, FUEL CELL, HYBRID CASES, THE DEMAND FOR HYDROCARBON FUELS IS IN THE **HUNDREDS OF BILLIONS OF GALLONS**

The current market size is ~900B Gallons (WW)

- In the **median scenario**, energy dense hydrocarbons are forecast to fuel **57% of transport energy in 2050**
 - These estimates already incorporate aggressive EV adoption and higher shares of renewable energy, including biomass-based renewable fuels.
- Even **in the most-aggressive mitigation scenario, oil is projected to fuel over 20%** of the global transport sector in 2050.
- In the **least-aggressive scenario**, energy dense liquids will fuel nearly **83%** of the global transport sector in 2050.

Projections of Quantity of Energy Delivered by Hydrocarbons to Transportation Sector in 2040 and 2050



Most Optimistic Scenario of Hydrocarbon Fuel Reduction Projects
245 BGPY of Demand

For full set of citations, please see appendix. Note: Liquid hydrocarbons less biofuels used in Shell scenarios to proxy oil consumption. IRENA estimates for transport oil consumption proxied by nonrenewable, nonelectric energy consumption.

ENORMOUS TOTAL ADDRESSABLE MARKET

Total Market



888 Billion

gallons per year⁽¹⁾

2030E Global Liquid Fuels Demand

80%+ EV Scenario (Low Estimate)



245 Billion

gallons per year

2050E Global Liquid Fuels Demand Required in 80% EV Scenario⁽²⁾

Single Net-Zero Plant Capacity

- Gevo expects to be able to change the mix of jet fuel and gasoline production with a catalyst change
- Jet fuel is uniquely reliant on low-carbon replacements to achieve net-zero (cannot be replaced by EVs)
- Increasing value for Gevo's isooctane for both low-carbon attributes, and as a high-quality blendstock to upgrade to premium gasoline (vehicle get better mileage, less smog, etc.)

46 Million

gallons per year⁽³⁾

**Planned Capacity of One Gevo Net-Zero plant
Represents 0.02% of Market in 80%+ EV Scenario⁽²⁾**

(1) Source: BP Energy Outlook 2020. Reflects Business-as-usual scenario.

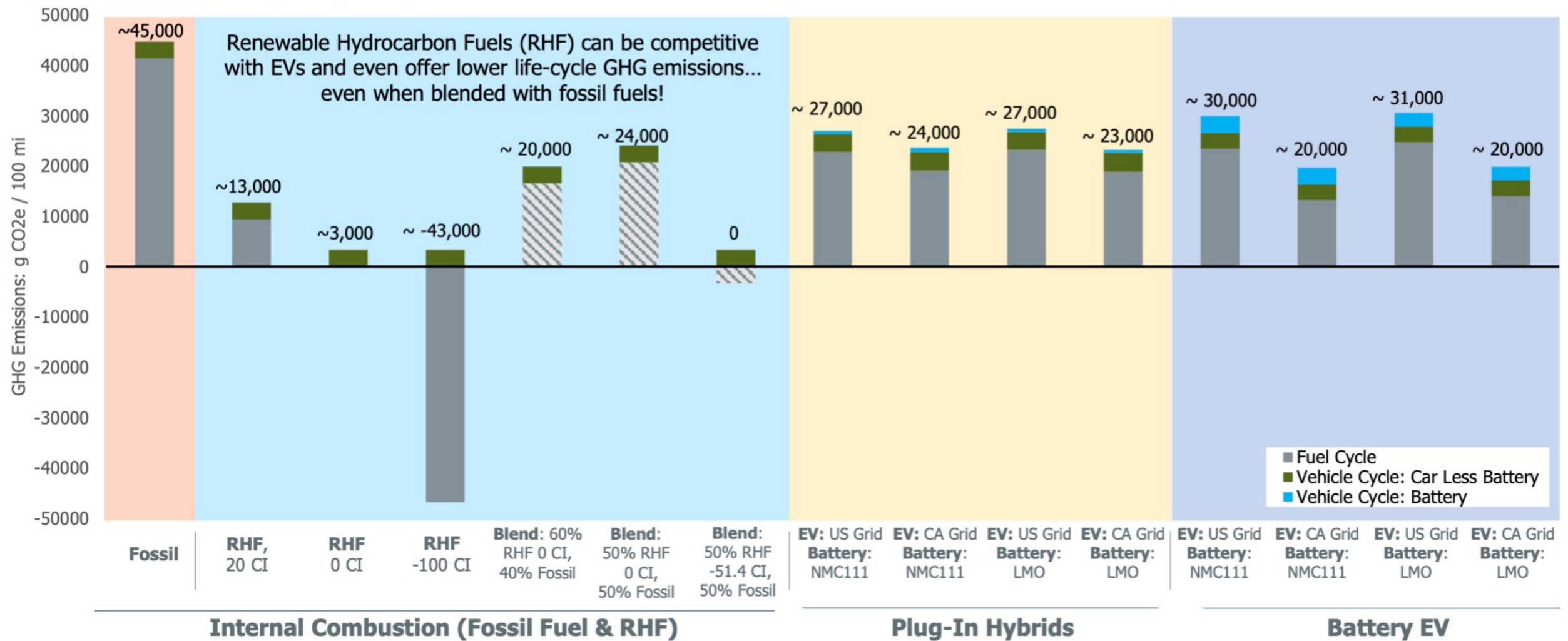
(2) Based on BP Energy Outlook 2020. Net Zero scenario assumes that global carbon emissions fall by over 95% by 2050 broadly in line with a range of scenarios limiting temperature rise to 1.5 degrees Celsius. Net Zero assumes EV adoption rate of 80%+ and renewable energy share of ~59% by 2050E. Based on Project Net-Zero 1 planned capacity.



LOW-CARBON AND CARBON NEGATIVE FUELS HAVE POTENTIAL TO REDUCE GHG'S AS MUCH AS, OR MORE THAN ELECTRIC VEHICLES—*IF THEY ARE DONE THE RIGHT WAY*

Life-Cycle Emissions Estimates Per 100 Miles

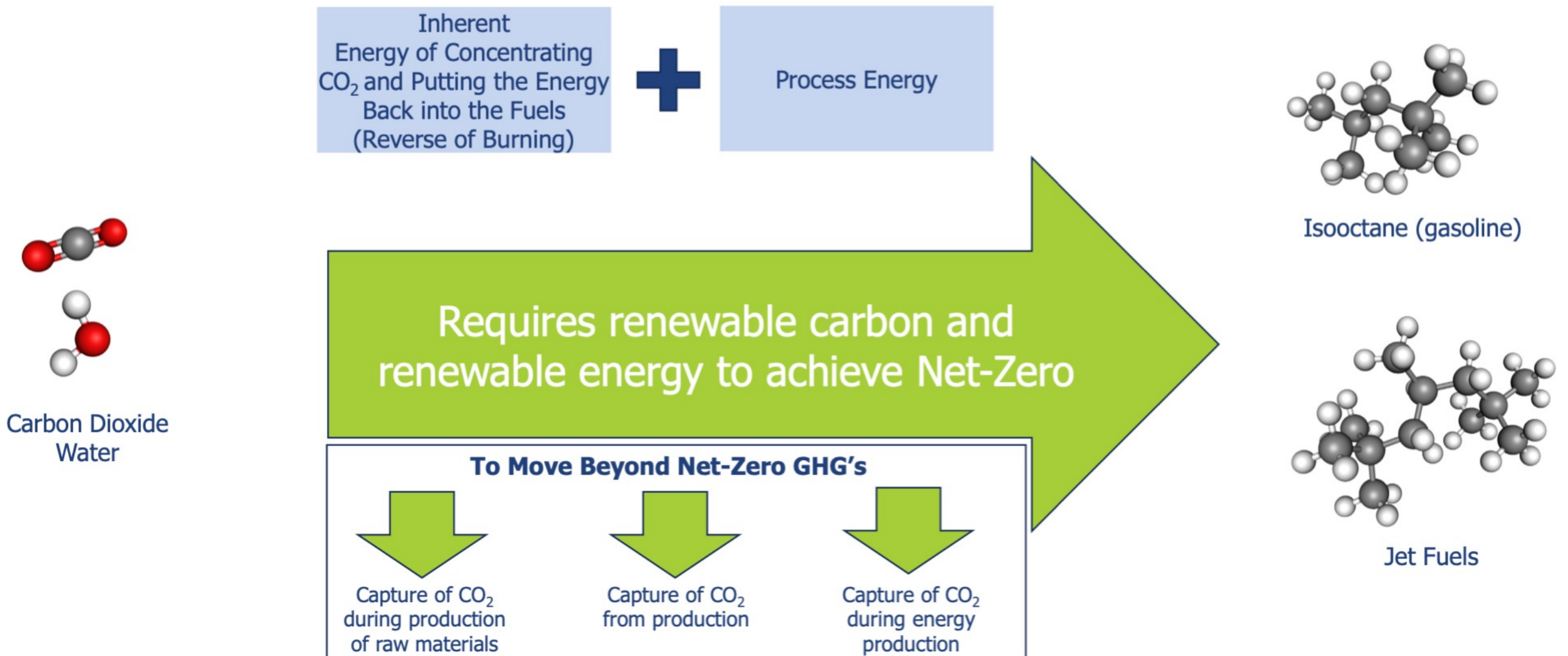
Comparison of Vehicle Emissions (g CO₂e / 100 mi)¹



Source: J.B. Dunn, L. Gaines, J. C. Kelly, C. James, C., and K. G. Gallagher, "The Significance of Li-ion Batteries in Electric Vehicle Life-Cycle Energy and Emissions and Recycling's Role in Its Reduction," energy and Environmental Sciences, 2015, as updated by the authors using the most recent U.S. DOE, Argonne National Laboratory, GREET Model, 2018, <https://greet.es.anl.gov>
Notes: Global warming potential measured in grams carbon dioxide equivalent emissions per vehicle kilometer traveled averaged over the lifetime of the vehicle; model year 2012 internal combustion engine vehicle (ICEV); 2012 plug-in hybrid electric vehicle; 2012 battery electric vehicle (BEV); US electricity grid, 2017 average; California electricity grid, 2017 average, lithium-ion battery with LiNi_{0.4}Co_{0.2}Mn_{0.4}O₂ cathode materials paired with graphite anodes (NMC111); lithium-ion battery with a LiMn₂O₄ cathode material paired with graphite anodes (LMO). Unit conversions performed by Gevo. Gevo scenarios assume RHF fuel used with standard ICEV. Gevo calculations used for RHF scenarios assuming given CI scores.



MOVING BEYOND NET-ZERO: SEQUESTRATION OF CARBON



HIGH-VALUE PROTEIN, DROP-IN GASOLINE, JET FUEL, AND OTHER HYDROCARBONS WITH NET-ZERO GHG EMISSIONS WHEN BURNED

Raw Materials



Most carbohydrate-based raw material can work

High-value Protein (Pet Nutrition/Aquaculture)⁽¹⁾ & Oil



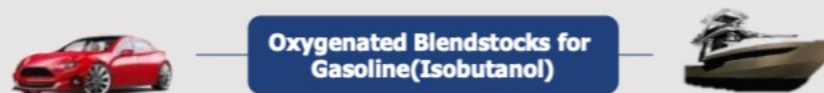
Jet Fuel



Renewable Premium Gasoline (Isooctane)⁽²⁾



Oxygenated Blendstocks for Gasoline (Isobutanol)



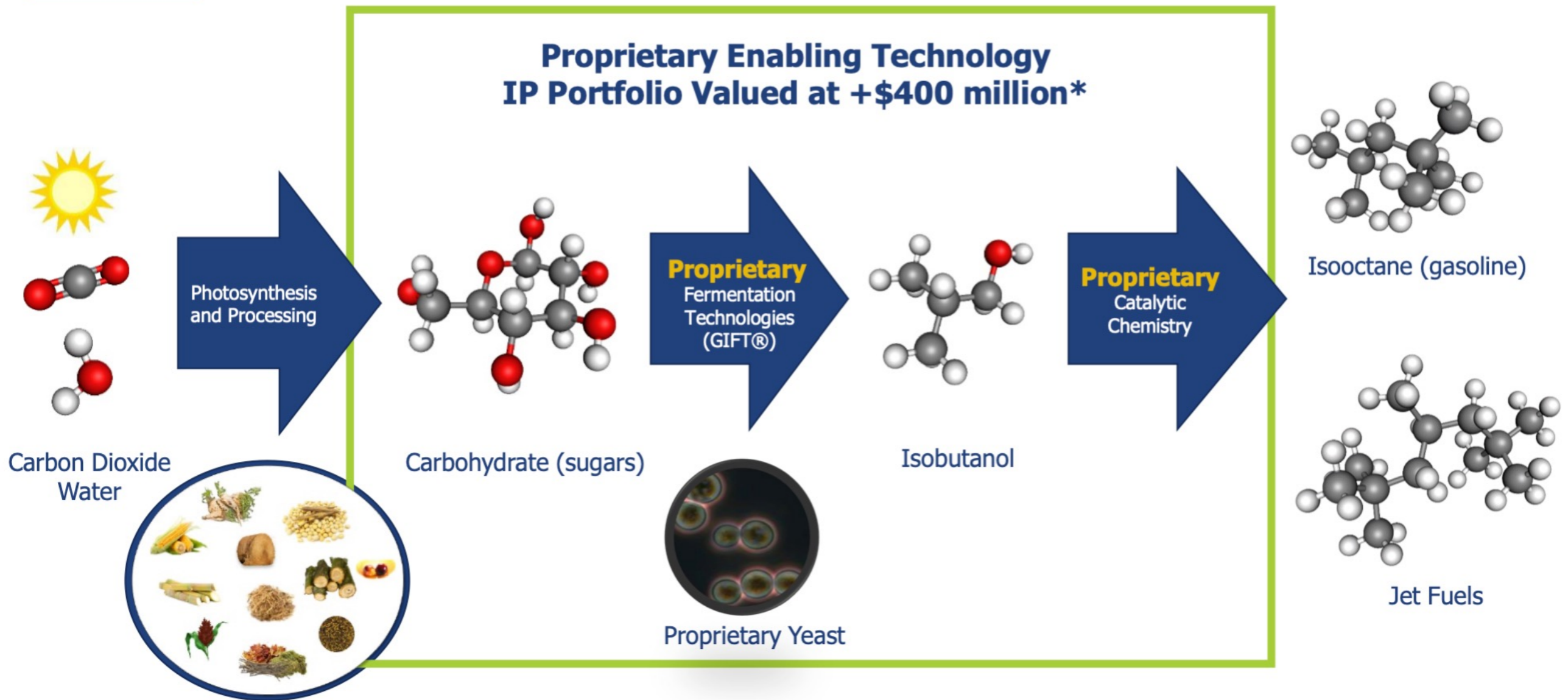
Diesel (Future Intent)



- Proven technology in production and product use
- The value of carbon can now be priced
- We believe we have customer demand to require multiple large plants
- We are using a Take-or-Pay contract approach, successfully, with customers

(1) Added to end products
 (2) Certain regulatory approvals required in some jurisdictions.

HOW WE DO THE "REVERSE OF BURNING" IN A SUSTAINABLE SYSTEM



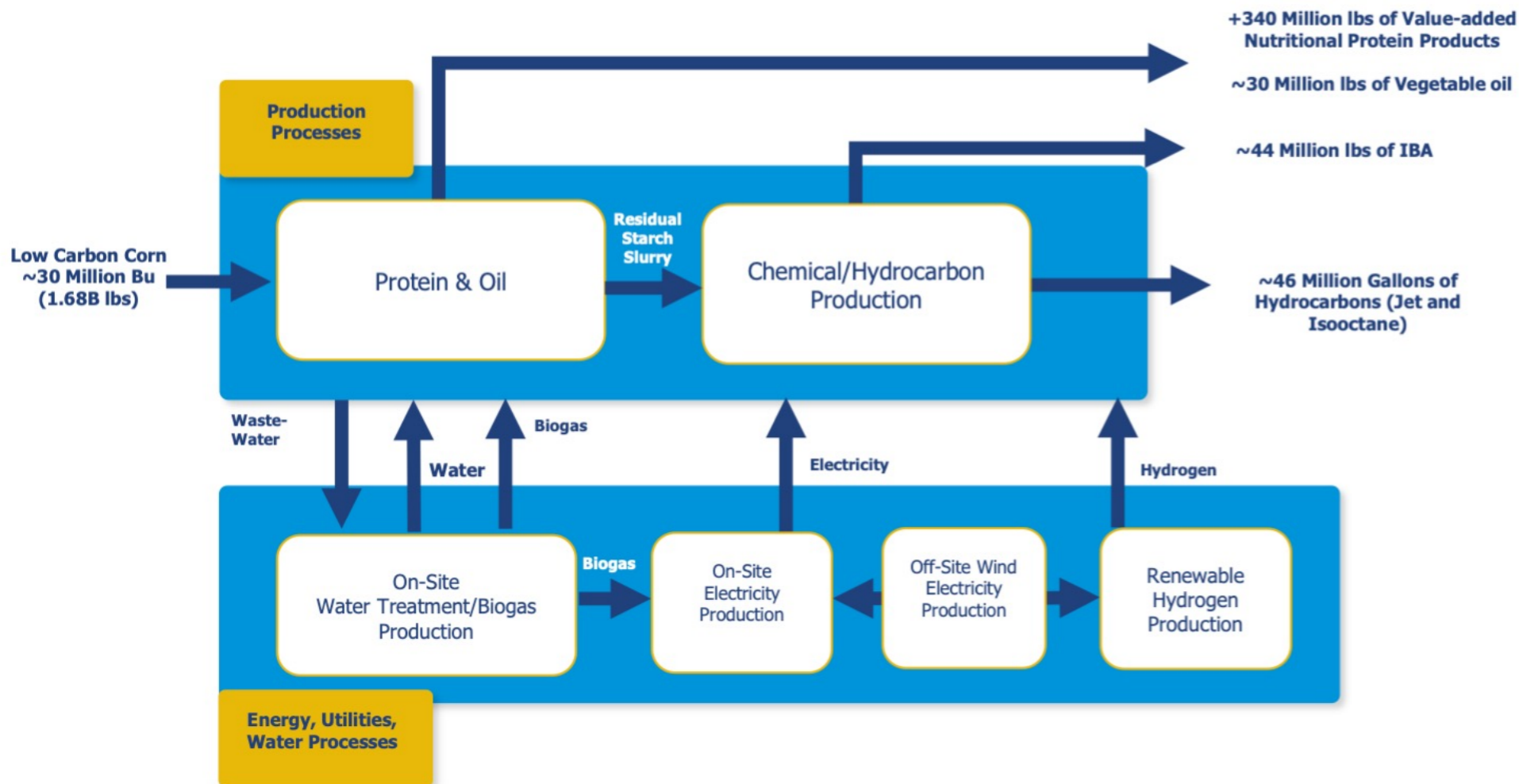
*Estimated Value of IP by Peak Value IP LLC, August 2020

PERSPECTIVE AND APPROACH TO NET-ZERO PROJECTS

- Continue to focus engineering work, product mix, and unit operations to optimize economics and mitigate potential operating risks
 - Target 18-20% levered IRR
 - Create additional optionality and profit opportunities with additional products, i.e.,
 - Maximize protein product and corn oil production and/or add value to the protein and/or oil
 - Sell chemical intermediates (IBA, olefins, other intermediates)
 - Energy (electricity, hydrogen, biogas, etc)
 - For NZ1, install extra fermentation capacity for risk mitigation and upside. This causes capital to go up but provides additional products and economic optimization. Deploy capital to make expansion, at a later date, easier.
 - Implement utilities and certain infrastructure using a third-party commercial and financing structures thereby benefitting from expected lower cost of capital.
- Optimize the capex, the leverage, equity investment, and returns with the intent maximizing cash distributions to Gevo

SCOPE OF NET-ZERO 1*--UPDATED JULY 2021

An "Off-the-Grid" Renewable Protein, Oil, Chemical and Hydrocarbon Plant**



- UPDATES TO SCOPE**
- Increase of IBA capacity so we have ability to develop the IBA specialty markets
 - Small increase of hydrocarbon capacity
 - Increase of value-added nutritional protein products
 - On-site wastewater and related biogas production expected to be done in a separate project with lower cost financing
 - Increase of site infrastructure to facilitate capacity expansions

*Currently Planned for Lake Preston, volumes of inputs and products are subject to change. **The plant would be connected to the grid to supply energy to the grids, and also to take energy from the grids if needed. The plant is being designed to be self sufficient for its energy between what can be generated on-site and from the planned off-site wind farm. Gevo may also bring RNG to the plant from its RNG project.

PROJECT NET-ZERO 1 UPDATE AND SUMMARY⁽¹⁾

ENGINEERING WORK IS ON TRACK---WE ARE CONTINUING WORKING THROUGH OPTIMIZATIONS

Key Projected Base Case Economics

Projections as of July 2021	Millions
Installed Capital Cost	~\$720
Fully Financed Installed Capital Cost	~\$980
Project Revenue	~\$340-350/yr
Project EBITDA	~\$150-160/yr
Returns to Gevo (levered IRR)	18-20%
Projected Cash Distribution to Gevo	\$80-90/yr

Please read the information in the box to the right for more explanation. Please see the footnotes on this slide for additional assumptions.

Projected Timeline and Capacity

- Planned construction start: 1H 2022
- Planned Start-Up: 1H 2024
- Projected to produce ~46MMGPY of Net-Zero⁽²⁾ footprint renewable jet fuel and gasoline fuels, plus
- Capacity for ~44MMlbs of IBA for specialty markets
- ~340MMlbs of high-value protein products
- ~30MMlbs of corn oil products

Overview and Current Economic Assumptions/Projections

- Hydrocarbon Capacity is sold out (oversubscribed) based on our take-or-pay contracts.
- Plant Revenue is currently projected to be ~\$340-\$350M/yr. This includes the hydrocarbon products, carbon value, nutritional protein value, corn oil value, and revenue from IBA that we expect to produce in excess of what is needed as feedstock for hydrocarbon capacity.
- Current projection of Plant Project EBITDA is ~\$150-\$160M/yr based upon the pricing in current contracts, and the assumptions outlined on slide 29 of this deck.
- Projected levered IRR Gevo of ~18-20% including all revenue streams (distributable cash, O&M fees). The distributed total cash to Gevo from the project after debt service and major maintenance is currently projected to be ~\$80-\$90M/yr once the plant is at steady state, based on 65% debt.
- The capital cost projection of ~\$720M for equipment and build-out (installed hard costs) which leads to a fully financed cost of ~\$980M (fully installed, fully deployed, fully financed with provision for interest during construction and debt reserves, based on current debt estimates). This cost includes increased capacity for hydrocarbons, addition of more IBA capacity to serve specialty markets, infrastructure to facilitate capacity expansion, adoption of certain unit operations to facilitate GHG reduction, and increased costs of steel and equipment based on latest data.
- Waste-water treatment and on-site biogas production is currently planned to be a separate project with separate funding (at an anticipated cost of capital commensurate with infrastructure returns) using a third-party build, own, operate (BOO) model. On-site biogas production is expected to meet the thermal demand for the plant.
- A separate but related wind power project is being developed to meet the majority of the NZ1 electricity demand. This wind project would be "wired" directly to NZ1. The wind project would be a separate project with separate funding (at lower cost of capital) using the BOO model.
- We plan on making Green Hydrogen. Current scope of capex includes the capacity of hydrogen we need for our products. We are still determining if and how much excess to make for the marketplace and economic benefit to Gevo.

(1) The Net-Zero 1 Project financial projections on this slide are "forward-looking statements" based on current engineering work completed as of July 2021 and Gevo's internal financial models. The current projections are subject to change in the future due to a number of factors, including due to new information related to capital costs, production costs, macro-economic effects, government policy changes, or other factors. The projected capital costs are subject to change based on the completion of the engineering and design work and other factors. Based on the current engineering and design work, the current hard capital cost estimates carry a +/- 30% factor. A number of assumptions were used to determine the projections, including, but not limited to, Federal, California and European low carbon credit values remaining approximately at current levels across the life of the project and the assumptions described on the following slide. Project EBITDA as used herein in a project finance modeling context is a non-GAAP measure calculated by subtracting all forecast operating expenses from operating revenue. The projections include the anticipated costs of services paid in connection with the ancillary wind electricity project and combined waste-water treatment/site anaerobic digester project.

(2) Based on full cradle-to-cradle analysis using Argonne National Laboratories GREET model. Includes agricultural practices, energy sources, supply chain, and end fate of product.



Lake Preston and NZ1

Status

- Development costs fully funded
- Construction equity fully funded
- Capacity fully sold-out using take-or-pay contracts
- EPC firm engaged in front-end engineering and design
- Project delivery contract (EPC) in negotiation
- Permitting on schedule
- Project debt financing in preparatory stage in parallel with development
- Target close on debt funding 1H 2022

The NZ1 construction is expected to employ ~1000 people

The permanent regional employment impact is estimate to be over 900 jobs (~70 FTEs on site)

Lake Preston, South Dakota



Greenfield Site (Lake Preston, SD)*



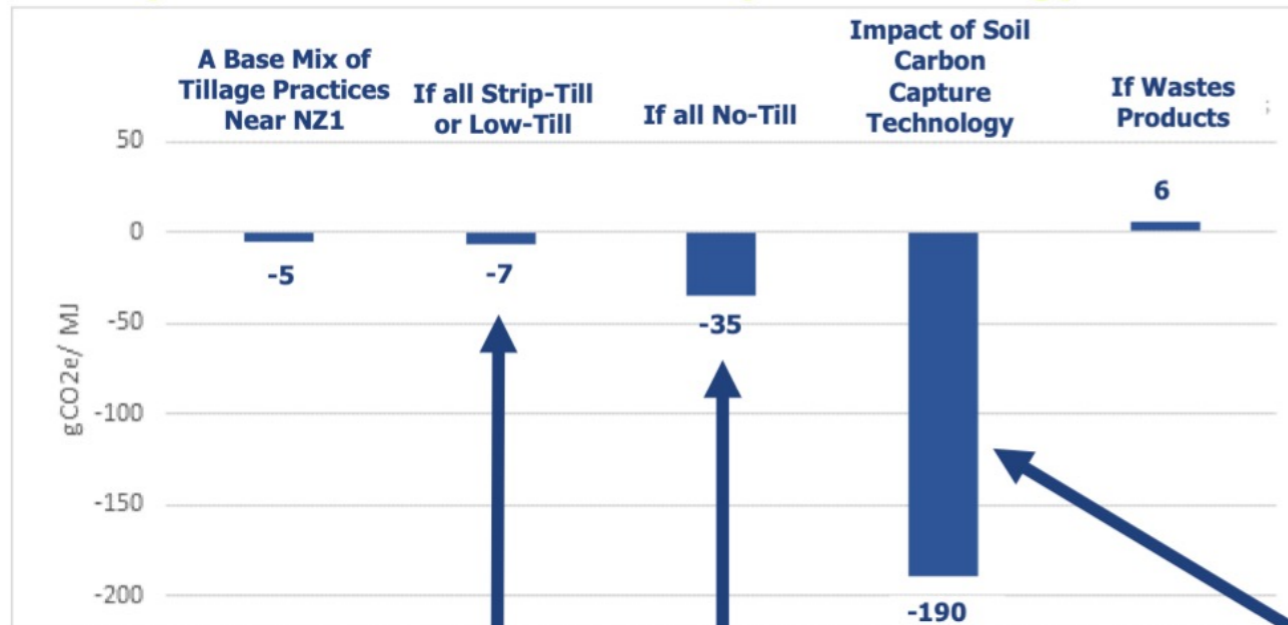
*Site overlay not to scale and subject to change.

Gevo assessment of operating period economic impact is based on Net Zero 1 operating projections and the Bureau of Economic Analysis' Kingsbury County, South Dakota RIMS2 Multipliers - 2018 Data. The impacts include initial impact and indirect and induced effects of economic activity, as captured by the RIMS2 multipliers. Construction period employment is an estimate of direct jobs and Gevo has not assessed potential indirect and induced effects of construction on the region.

GOING BEYOND NET-ZERO: CAPTURING CARBON IN THE SOIL

SUSTAINABLE AGRICULTURE OFFERS POTENTIAL UPSIDE IN COMBINATION OF RENEWABLE ENERGY IN PRODUCTION

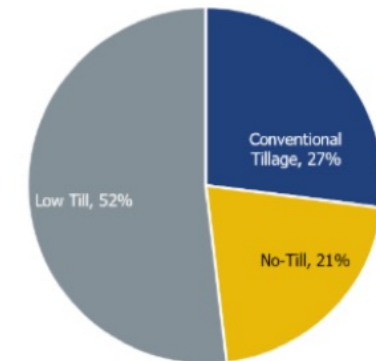
Impact of Agricultural Practice on Total Life-Cycle GHG Emissions for Hydrocarbons Burned for Transportation Energy ⁽¹⁾



Agriculture improvements are practical and being done

- Sequester carbon in the soil
- Higher yield
- Less inputs

Tillage Practices Near Net-Zero 1 Site ⁽²⁾



Based on data and trials by LOCUS, a company who believe soil organic carbon (SOC) can be dramatically increased by building root systems and other soil amendments. If true, the amount of carbon capture per gallon could be in the 10's of kgs per gallon. We are working with them and other companies to figure it out.

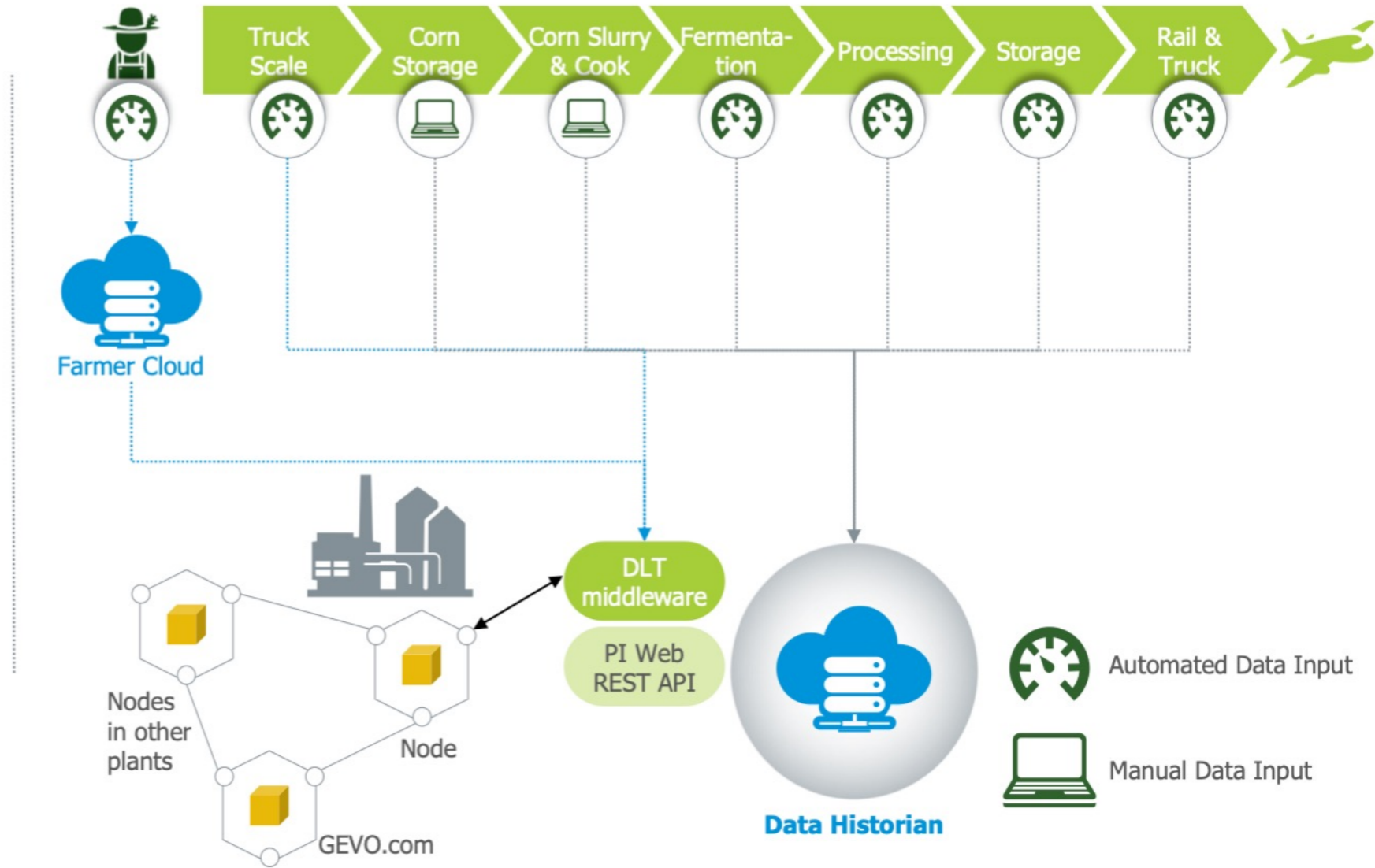
(1) EcoEngineers is in process of a detailed review and analysis.
 (2) EcoEngineers, USDA – NRCS 2019 South Dakota Cropping Systems Inventory Report.

TRACKING CARBON AND SUSTAINABILITY ACROSS THE BUSINESS SYSTEM



Gevo is partnering with Blocksize Capital to establish a **blockchain** technology for tracking sustainability, building trust and setting the highest standards for the industry

- Savings due to digitalization & automation
- Encoded Data
- Tamper-proof
- Avoid Greenwashing and Double Counting



GEVO NW IOWA RENEWABLE NATURAL GAS FACILITY

Description

- 355,000 MMBtu/yr RNG
- ~\$70mm capex
- +30% LIRR⁽¹⁾
- Multiple dairy farms with over 20,000 milking cows combined
- Gas upgrading system to be located adjacent to Northern Natural Gas pipeline
- Sell RNG to LCFS market *and to augment Gevo renewable fuels production*

Status

- ✓ Under Construction and ON TRACK
- ✓ Start-up expected in early 2022
- ✓ Sales & purchase agreement in place with bp

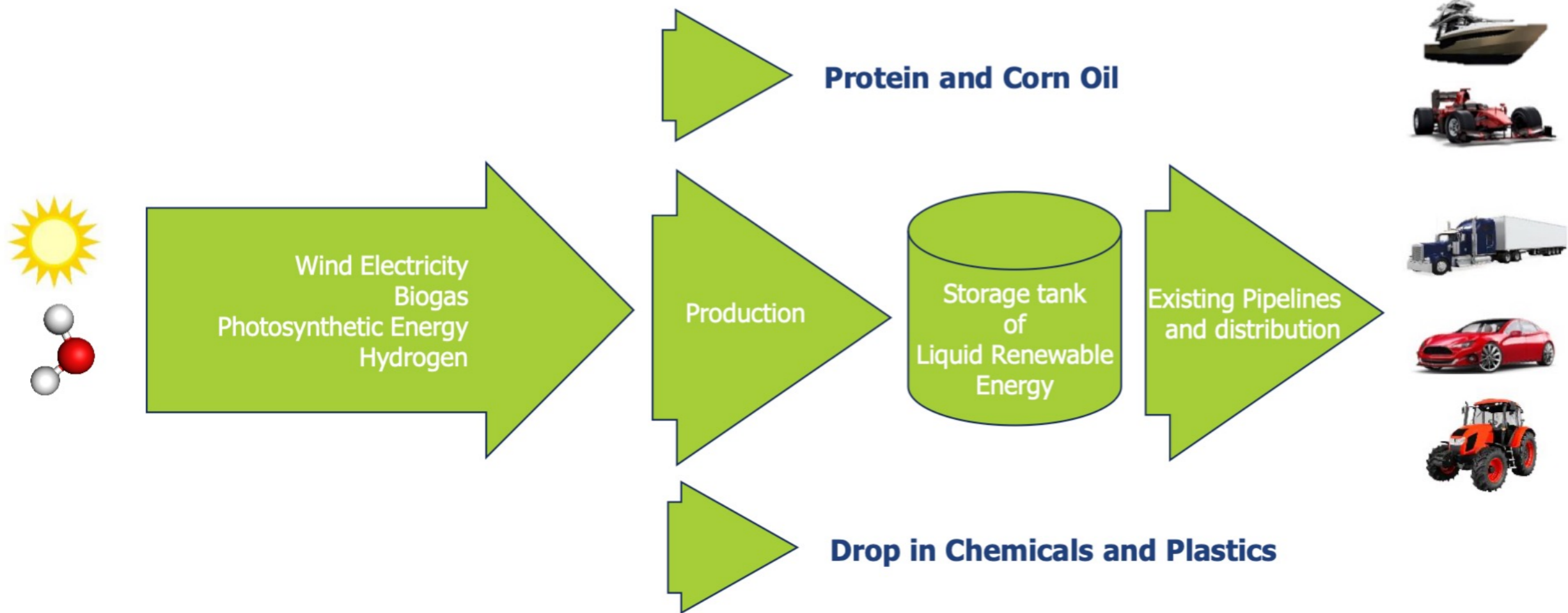


(1) Projected project-level leveraged internal rate of return based on project financing structure and assumptions around offtake contract pricing, number of cows producing manure, carbon value, capital costs, and operating costs, all of which are subject to change and revisions. The returns assume that at least 50% of the RNG is sold into CA for transportation use.

bp authorized the use of bp logo in this presentation

RENEWABLE ENERGY AND CARBON TRANSFORMED TO DROP-INS

Easy to Store, Easy to Use, Drop-in, Works with Existing Infrastructure, Fleets, Chemical Processing and Plastics Production





Ulsan, South Korea, the industrial heart of the Korean peninsula and found along the country's southeast coast, has set a vision as a hydrogen hub and as a hydrogen city — the economic development analysis for the hydrogen industry base district has been completed, and 86 companies and related organizations are currently located in the district. Research institutions in related industries are located in the district, including the eco-friendly battery convergence demonstration complex . he hydrogen supply pipe is connected to the district, for hydrogen-related demonstration research.

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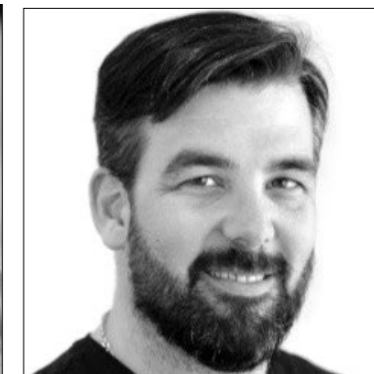
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