Executive Summary

The year 2023 has been a landmark period in the journey of HYSKY Society, marking significant strides in our mission to propel the hydrogen aviation industry forward. As a non-profit organization that emerged from the Vertical Flight Society's H2eVTOL Council, we have dedicated ourselves to being at the forefront of advocating, educating, and collaborating in the field of hydrogen-powered aviation. This annual report encapsulates a year of groundbreaking achievements, innovative partnerships, and influential community engagements that have shaped the trajectory of hydrogen aviation.

Throughout the year, HYSKY Society has hosted a series of enlightening HYSKY Monthly events, bringing together experts and industry leaders to share insights and spark dialogue on various aspects of hydrogen aviation. We have also made substantial progress in content creation with the successful launch of the HYSKY Pod, a podcast that delves into the latest trends and developments in the industry. Our commitment to diversity and education was further underscored through initiatives like the tribute to International Women's Month and the development of a comprehensive hydrogen aviation education curriculum in partnership with Moran Innovation.

Significant milestones this year included the launch of groundbreaking programs such as AI Mastery, designed to integrate advanced technologies into aviation workflows, and the successful hosting of FLYING HY, the world's largest hydrogen aviation event. The formation of the Hydrogen for All Alliance (HYFA) and collaborations with key industry players underscored our proactive role in shaping the industry's future.

As we close 2023, we reflect on a year of unparalleled growth and engagement. This report details each month's journey, highlighting our endeavors, achievements, and the collective effort of our community. It sets a foundation for the exciting developments and opportunities awaiting HYSKY Society in 2024, as we continue to drive innovation and progress in hydrogen aviation.

Sincerely,

Danielle McLean
CEO, HYSKY Society
January 2023

January was a busy and exciting month for the hydrogen aviation industry! One of the highlights was the official launch of HYSKY Society, a new non-profit organization that spun out of the Vertical Flight Society’s H2eVTOL Council. HYSKY’s mission is to advance hydrogen aviation. The H2eVTOL Council, monthly meetings held since 2020, continued under HYSKY under the new name, HYSKY Monthly.

January’s HYSKY Monthly, our 38th episode, Distinguished Speaker was Edward (Ned) Meagher, partner at Carter De Luca. Ned’s talk was titled “IP Strategies for Protecting Hydrogen Aviation Technologies” and can be found HERE. This webinar provided valuable insights into how companies can protect their intellectual property in this rapidly evolving industry.

Another notable event was the 2023 Autonomous VTOL Technical Meeting & Electric VTOL Symposium, which featured a hydrogen panel moderated by Danielle McLean. The panelists included Elizabeth Collins, formerly with NREL (now at Airbus); John Piasecki, CEO of Piasecki Aircraft Corporation; and Dr. Alex Ivanenko, formerly with HyPoint and ZeroAvia (now at HyWatts). They discussed the latest developments and challenges in hydrogen-powered vertical takeoff and landing (VTOL) aircraft.

Finally, it was an honor for Danielle McLean to be named as an influencer in eVTOL Insights 2023 Power Book. This recognition highlights her contributions to the industry and her leadership in driving innovation and progress in hydrogen aviation. Overall, January was a month full of exciting developments and progress for the hydrogen aviation industry.
February 2023

The momentum continued in February with our 39th enlightening HYSKY Monthly event. This month, we were privileged to host Dr. Stefan Mändl, CEO of SilentWings, who shared his expertise on hydrogen fuel cell-powered drones.

His presentation, titled ‘H2 Fuel Cell Powered Drone,’ delved into the intricacies of integrating hydrogen fuel cells into UAV technologies. Dr. Mändl’s insights provided a glimpse into the future of unmanned aerial vehicles and their potential role in a hydrogen-powered aviation landscape. This session, like all HYSKY Monthly webinars, offered a unique platform for knowledge exchange and industry networking, further cementing HYSKY Society’s role as a key player in the hydrogen aviation sector. The event was not only an opportunity to learn from a leading expert but also a testament to HYSKY’s commitment to fostering innovation and dialogue within the hydrogen aviation community.

For Black History Month, HYSKY published a tribute to Black aviators, the Tuskegee Airmen and Bessie Coleman.

We also published an insightful article titled "A Breath of Fresh Air: The Potential of 3D Printed Organs in Hydrogen Aviation.” This piece explored the innovative intersections of medical technology and aviation, showcasing how hydrogen can play a role in revolutionary applications beyond transportation.
March 2023

March was a pivotal month for HYSKY Society, marked by significant strides in content creation and community engagement. We launched the HYSKY Pod, a podcast dedicated to discussing the latest trends and developments in hydrogen aviation. The inaugural episode featured co-founder Rishav Shrestha, Dabin Kim, and Drea Hickman, offering listeners an insider’s perspective on the industry's growth and future prospects.

In tribute to International Women’s Day, HYSKY highlighted the vital contributions of Mileva Marić Einstein, the often forgotten first wife of the renowned physicist Albert Einstein.

Our 40th HYSKY Monthly session featured Peter Connors, a partner at Orrick, who presented "IRA & What It Means for H2 Aviation." This talk provided a deep dive into the implications of the Inflation Reduction Act for the hydrogen aviation industry, offering valuable perspectives on policy and its impact on sector growth.

These initiatives reflect HYSKY's dedication to education, diversity, and thought leadership in the hydrogen aviation community.
April 2023

April was a month of remarkable growth and collaboration for HYSKY Society. We released the second episode of the HYSKY Pod, focusing on NEX Aero's successful funding round, a significant milestone in the hydrogen aviation industry. This episode offered listeners insights into the financial aspects and investor confidence in hydrogen-powered aviation.

In a major development, HYSKY Society was thrilled to receive a grant from SoCalGas. This support was a testament to the growing recognition and backing of hydrogen aviation initiatives by major energy players.

Our 41st HYSKY Monthly event featured Johannes Garbino-Anton, CTO of NEX Aero, who delivered a presentation titled “The First Dedicated Hydrogen Powered eVTOL Optimized for the Fuel-Cell Powertrain Integration.” His talk provided an in-depth look at the challenges and innovations in designing hydrogen-powered eVTOL aircraft.

Adding to our team, we welcomed Dabin Kim, an expert in hydrogen eVTOL design. Dabin’s expertise promised to significantly contribute to our research and development efforts. April’s activities underscored HYSKY Society’s commitment to fostering innovation, education, and collaboration in the hydrogen aviation sector.

We also announced an exciting partnership with Moran Innovation to develop a comprehensive hydrogen aviation education curriculum. This collaboration aimed to foster knowledge and skill development in the burgeoning field of hydrogen-powered aviation.
May 2023

May was a month of continued progress and strategic partnerships for HYSKY Society, further establishing our role in the hydrogen aviation sector.

We released the third episode of the HYSKY Pod, maintaining our commitment to providing insightful and up-to-date discussions on the latest trends and developments in hydrogen aviation.

Our 42nd HYSKY Monthly session was graced by Tom Freund of Dig.y.sol, who presented “Enhancing Trustworthiness of On-Board Hydrogen Propulsion.” His talk focused on the critical aspects of safety and reliability in hydrogen propulsion systems, an essential topic for the advancement and acceptance of hydrogen-powered aviation.

Additionally, we were honored to receive a generous donation from LuftCar, a gesture that not only supported our initiatives but also reflected the growing industry support for hydrogen aviation.

These activities in May demonstrated our dedication to fostering meaningful collaborations and enhancing knowledge in hydrogen aviation.
June 2023

June marked another productive month for HYSKY Society, with a focus on educational content, industry collaboration, and program development.

In our fourth HYSKY Pod episode, we delved into the inspiring story of Dr. Martine Rothblatt and Piasecki Aircraft’s acquisition of the Sikorsky HeliPlex, highlighting a significant shift in the hydrogen-powered aviation landscape. This episode shed light on the strategic moves shaping the industry’s future.

A landmark announcement was the collaboration between HYSKY and Moran Innovation to launch the Hydrogen Aviation Course, set to be taught at FLYING HY. This course, featuring Matt Moran and Danielle McLean, aimed to educate and inspire the next generation of aviation professionals about the potential of hydrogen in aviation.

Our 43rd HYSKY Monthly session featured a special presentation by our own CEO, Danielle McLean, titled “U.S. National Clean Hydrogen Strategy Implications for the Aviation Sector.” This talk was a follow-on to the DOE’s U.S. National Clean Hydrogen Strategy and Roadmap publication, offering critical insights into national policy and its impact on the sector.

Additionally, we introduced AI Mastery, an innovative program designed to assist companies and individuals in integrating AI into their workflows, underscoring our commitment to embracing cutting-edge technologies in aviation and beyond.

We also received a generous donation from Moreton and Company and conducted an in-depth interview with the company’s risk advisor, Rob Oldroyd. We published “Cover Your Assets,” a deep dive on the risks that startups face, particularly in hydrogen aviation, and learned how small companies can protect themselves.
July 2023

July continued to showcase HYSKY Society’s growing influence and commitment to advancing hydrogen aviation. We were gratified to receive a generous donation from Leybold, which bolstered our efforts and reflected the industry’s confidence in our mission. This support was instrumental in fueling our ongoing projects and initiatives.

In our effort to embrace and integrate emerging technologies, HYSKY held several AI training workshops. These sessions aimed to empower industry professionals and enthusiasts with the knowledge and skills to effectively implement artificial intelligence in their respective domains, highlighting our dedication to technological advancement in the aviation sector.

Additionally, we published a comprehensive summary of the “Securing Growth and Robust Leadership in American Aviation Act” released by the White House. This publication offered a detailed look at the policy implications for the aviation industry, reinforcing our role as a thought leader in the field.

The 44th HYSKY Monthly speaker for July was Sergio Cecutta, founder of SMG Consulting. His presentation, titled “Regional Air Mobility: Hydrogen best launch market?” provided an insightful analysis of the potential of hydrogen in revolutionizing regional air mobility. Cecutta’s expertise offered a unique perspective on the strategic positioning of hydrogen technology in the aviation market.

July’s activities demonstrated HYSKY Society’s commitment to fostering a deeper understanding of hydrogen aviation technologies and their potential impact on the industry.
August 2023

August was marked by significant recognition and insightful discourse for HYSKY Society. A major highlight was the announcement of a substantial $199 million term sheet received by LuftCar, a member of HYSKY. This financial milestone underscored the growing investor confidence in hydrogen aviation technologies and the potential they hold for transforming the industry.

These events in August reflected HYSKY Society’s continued dedication to fostering a supportive and informative environment for the growth and development of hydrogen aviation.

The 45th HYSKY Monthly session featured Howard Kass, a former executive at Lilium. His talk, titled “The Current Regulatory Process - It’s Better Than You Think!”, offered a reassuring perspective on the regulatory landscape for hydrogen aviation. Kass’s insights provided clarity and optimism, addressing common concerns and misconceptions regarding the regulatory hurdles faced by new technologies in the aviation sector.
September 2023

September at HYSKY Society was a month enriched with groundbreaking discussions and strategic insights. A significant milestone in our content creation was the HYSKY Pod featuring its first external guest, Dr. Martine Rothblatt. This episode offered listeners an extraordinary opportunity to hear from a pioneering figure in the field, providing a unique perspective on the future and potential of hydrogen-powered aviation.

Our 46th HYSKY Monthly session was particularly notable, with Jeffrey Chase of SoCalGas and Marc Wiseman of Arthur D Little presenting “SoCalGas’ Findings on 'The Hydrogen Enabled Airport Ecosystem'.” Their talk delved into the practical aspects of integrating hydrogen technologies in airport and vertiport infrastructure, a crucial step towards realizing a hydrogen-powered aviation future.

Additionally, we were honored to receive a generous donation from Dr. Martine Rothblatt. This gesture not only supported our initiatives but also symbolized the industry’s belief in our vision and mission.

September’s activities underscored our commitment to bringing diverse voices and deep insights to the forefront of the hydrogen aviation conversation.
October 2023

October was a landmark month for HYSKY Society, filled with events and achievements that significantly advanced our mission in hydrogen aviation. The highlight of the month was hosting FLYING HY, the world's largest hydrogen aviation event, in Grand Forks, North Dakota. This event, co-located with the UAS Summit & Expo, brought together leading minds and innovators in the field, showcasing the latest advancements and fostering collaborative discussions. FLYING HY represented a major step forward in establishing a global platform for hydrogen aviation dialogue and development. Speakers included:

- Danielle McLean, HYSKY Society
- Mike Hirschberg, Vertical Flight Society
- Fiona McKay, ZeroAvia
- John Piasecki, Piasecki Aircraft Corp
- Dr. Julia Bodnarik, Choctaw Nation of Oklahoma
- Martin Chan, Stratospheric Platforms
- Josef Kallo, H2Fly
- Joseph Rainville, Bell Flight
- Pradeep Thangappan, Aeroavilos
- Shane Morris, Booz Allen Hamilton
- Jim Jung, Interstate Traveler Co. LLC
- Santh Santhya, LuftCar
- Bill Spellane, Alaka’i Technologies
- Ferguson Dale, Semper Sky, LLC
- Rex J Alexander, VFS
- Rob Oldryd, Moreton & Company
- Jérôme Gosset, Pyonnier
- Norbert Palenstijn, Leybold Inc.
- Mark van Wyk, FlyH2 Aerospace
- Matt Moran, Moran Innovations
- Mark Haberbusch, NEOEx
- Dave Franks, SAE
- Lt. Col. Michael A. Dunn, USAF
October 2023...


H2 Infrastructure Hubs Corridor Development

We were also fortunate to receive generous donations from H2Fly. Their support not only provided crucial resources for our initiatives but also reflected the growing momentum and industry backing for hydrogen-powered aviation.

These accomplishments in October demonstrated our continuous efforts to lead, innovate, and collaborate in the rapidly evolving world of hydrogen-powered aviation.
November 2023

November was a pivotal month for HYSKY Society, marked by significant collaborations and insightful discussions that furthered our mission in the hydrogen aviation sector. A major development was the formation of the Hydrogen for All Alliance (HYFA) in collaboration with USI International, Orrick, Moreton and Co. This alliance was a strategic response to the DOE DE-FOA-0003187: DEMAND-SIDE RFP FOR INDEPENDENT ENTITY RFP, showcasing our proactive approach in shaping the future of hydrogen aviation.

In our HYSKY Pod, we featured our second guest, John Piasecki, CEO of Piasecki Aircraft, who is at the forefront of building a hydrogen-powered helicopter. This episode provided listeners with an exclusive insight into groundbreaking innovations in hydrogen-powered rotorcraft.

Additionally, we were humbled to receive a generous donation from Dr. Martine Rothblatt, further emphasizing the industry's support and belief in our vision.

November’s activities highlighted HYSKY Society's commitment to forming strategic alliances and fostering educational discourse, essential for the advancement of hydrogen.

The 48th HYSKY Monthly session was graced by Gaël Le Bris of WSP, who presented "Integrating Hydrogen Technologies at Airports & Vertiports." His talk focused on the practical aspects of incorporating hydrogen technologies in aviation infrastructure, a critical factor in the sector’s transition to sustainable energy sources.
December 2023

Our founder and CEO, Danielle McLean, led the 49 HYSKY Monthly session, presenting a detailed summary of our annual accomplishments. This presentation not only highlighted the year’s milestones but also underscored the substantial progress we have made in the hydrogen aviation sector. Danielle’s overview provided a clear vision of our past endeavors and outlined the strategic direction for the coming year.

A major highlight was the announcement of the H2Hub Summit: Meet the Winners, scheduled for March 20, 2024. This half-day virtual event is set to bring together leading figures and innovators in hydrogen aviation, offering a dynamic platform for discussion and collaboration. Tickets can be purchased at https://www.hysky.org/h2hubs and sponsorship opportunities are available.

Moreover, in our commitment to making hydrogen aviation knowledge more accessible, we released all past HYSKY Monthly webinars on YouTube, free of charge. This move significantly broadened the reach of our educational content, allowing a global audience to benefit from the insights and discussions featured in these sessions.

https://www.youtube.com/@hy-sky

December’s activities and announcements beautifully encapsulated HYSKY Society’s year-long dedication to advancing hydrogen aviation through education, collaboration, and community engagement, setting a solid foundation for the exciting developments awaiting us in 2024.
EVE: HYSKY’s Electronic Virtual Entity

EVE - A New Era in Aviation Decarbonization
In December 2023, the HYSKY Society, a leader in aviation decarbonization, unveiled EVE - the Electronic Virtual Entity. EVE is our own GPT. This AI-driven initiative demonstrates HYSKY’s commitment to leveraging technology for environmental progress. Initially, EVE serves as a knowledge hub for HYSKY’s work, laying the foundation for future advancements in sustainable aviation.

Expanding EVE’s Capabilities in 2024
2024 will witness EVE’s evolution, as it integrates knowledge from aviation courses, HYSKY webinars, and scientific reports. This expansion is designed to fuse AI with expert insights, enhancing decision-making and strategies in hydrogen aviation and streamlining information access for all involved in this vital field.

EVE - Facilitating Inclusivity and Growth in Hydrogen Aviation
Beyond information storage, EVE is pivotal in involving more stakeholders in hydrogen aviation. It aims to educate and connect industry players, fostering a knowledgeable community. EVE is poised to be a key player in promoting hydrogen fuel adoption, steering the aviation industry towards a greener future.
HYSKY Awards 2023

Board Member of the Year

Reporting to a board was a new experience for me. It was scary and overwhelming.

One board member took extra time out of his mornings while getting his kids ready for school, to make sure that Rishav and I were always on the right path. The Board Member of the Year Award is a testament to the dedication, wisdom, and guidance that a board member has brought to our organization. This year, the honor goes to Shola Oyewole. Shola, your strategic insights, leadership skills, and profound understanding of the complexities of leading an organization have been invaluable to our journey. Your guidance has helped steer HYSKY Society through challenges and towards numerous successes. Your contributions on the board have not only shaped our present but have also laid a strong foundation for our future endeavors. We are deeply thankful for your commitment, wisdom, and inspiring leadership.

Podcast Guest of the Year

It is my pleasure to present our HYSKY Pod Podcast Guest of the Year award. This recognition goes to an individual whose contribution to our HYSKY Pod series has been exceptionally enlightening and impactful. This year, we are proud to honor Dr. Martine Rothblatt. Martine, your episode on the HYSKY Pod was not just a discussion; it was an inspiring journey through your innovative use of hydrogen in aviation to transport organs for transplants. Your profound insights and pioneering spirit captivated our listeners and significantly elevated the discourse around hydrogen-powered aviation. Your participation in our podcast has left an indelible mark on our audience and has greatly contributed to the success and reach of HYSKY Pod. Thank you, Martine, for sharing your invaluable perspectives and for being an integral part of our journey this year.
HYSKY Awards 2023

Donor of the Year

Next, I am delighted to announce our Donor of the Year. This award recognizes a supporter whose generosity has played a crucial role in advancing our mission at HYSKY Society. This year, we extend our heartfelt thanks and acknowledgement to SoCalGas. Your substantial support has been a cornerstone in enabling us to drive forward our initiatives and projects in hydrogen aviation. It is through contributions like yours that we can continue to innovate, educate, and lead in this critical field. SoCalGas, your commitment to sustainable energy solutions and your belief in our vision have been immensely encouraging. We are grateful for your partnership and unwavering support, which has been vital to our achievements this year.”

Person of the Year

Today, it is my great honor to announce the HYSKY Society Person of the Year. This accolade is reserved for an individual who has shown exceptional dedication, innovation, and leadership in the field of hydrogen aviation. This year, the award goes to none other than HYSKY’s COO, Rishav Shrestha. Rishav, through his unwavering commitment and visionary approach, has significantly contributed to our understanding and advancement of hydrogen-powered aviation. He is also a co-founder of HYSKY Society and has shown up every day, full time, before we had a dollar of funding. He truly shows what’s possible when you can get the right team together, even if it’s just the two of us. He’s often behind the scenes when I’m the face of the company, but no way would I be able to do any of this without him. Rishav, I cannot even put into words how grateful I am to have you, how excited I am to get you and Susma to the U.S. so we can realize our hydrogen aviation research center. Your compassion, committent, insights and expertise have fueled me to keep going, even when I sometimes don’t feel like it. You’ve helped our community and helped propel hydrogen aviation to new heights. Rishav, your passion and intelligence are truly transformative, and I am immensely grateful for your contributions to HYSKY Society and the broader field of hydrogen aviation.
2023: A Year of Empowering Hydrogen Aviation

As we reflect on the year 2023, HYSKY Society proudly acknowledges a series of impactful accomplishments and pivotal strides in the realm of hydrogen aviation. From our inception as a spin-off from the Vertical Flight Society’s H2eVTOL Council, we have steadfastly pursued our mission to advance hydrogen aviation, culminating in a year filled with innovation, collaboration, and significant industry contributions.

Our monthly webinar series, HYSKY Monthly, became a cornerstone for knowledge exchange and industry discourse, featuring a diverse array of experts who provided insights into various facets of hydrogen aviation. The launch of the HYSKY Pod further extended our reach, offering in-depth discussions and analyses of the latest trends and developments in the field.

Notable achievements this year included the successful receipt of grants and donations from key industry players, reflecting the growing support and confidence in our mission. The development of a hydrogen aviation education curriculum in partnership with Moran Innovation and our AI Mastery program demonstrated our commitment to integrating cutting-edge technology and education in our efforts.

Hosting FLYING HY, the world’s largest event dedicated to hydrogen aviation, underscored our position as a leader in the industry. The formation of the Hydrogen for All Alliance (HYFA) and our proactive engagements with various stakeholders exemplified our role in shaping the future of hydrogen aviation.

As we conclude the year, we take pride in our accomplishments and the collective effort of our community. The announcements and plans for the coming year, including FLYING HY 2024 and the H2Hub Summit, set the stage for continued growth and innovation.

HYSKY Society’s journey in 2023 has been a testament to the power of collaboration, innovation, and unwavering dedication to our cause. We step into 2024 with renewed enthusiasm and commitment, ready to tackle new challenges and seize opportunities in our ongoing quest to revolutionize the hydrogen aviation sector.