



**Mr. Andrew Gibson**

President & CEO,  
Member of the Board of  
Directors, Co-Founder

Mr. Gibson is currently President & CEO, Member of the Board, and Co-Founder of Empirical Systems Aerospace, Inc. He is responsible for overall business management, strategic direction, business development, customer facing actions, and contract management oversight of the San Luis Obispo, CA based aerospace engineering business.

He has 17 years of experience in the construction and management of design, technology demonstrator, prototype, design for manufacturing and manufacturing programs. He has 12 direct years of experience leading or supporting all of ESAero's All-Electric, Hybrid-Electric and Hybrid Electric Distributed Propulsion Programs, which all began with the ESAero ECO-150 (now ECO-150R) Turbo-Electric Distributed Propulsion Transport Aircraft.

Since co-founding ESAero in 2003, his work experience includes design, systems integration, and testing on a diverse number of programs. He was previously involved with ESTOL/CESTOL or other improved field performance aircraft since 2000, mainly with NASA Ames Research Center. This work culminated with 17 SBIR awards, 3 of which he was the Principal Investigator, and ALL of which are related to the design, development, methodologies, tools and analysis of TeDP or HEDP Air Vehicles. The SBIRs where he was not PI, he has been the overall Program Manager and Contract Officer. From these efforts, ESAero has been awarded 7 Phase II's and 3 Phase III contracts, all of which were the foundation to make ESAero the company it is today.

The most notable of these is the NASA X-57 "Maxwell", which was cultivated by Mr. Gibson in collaboration with the visionary people at NASA Armstrong and NASA Langley. ESAero/NASA's Maxwell will be the world's first distributed electric propulsion air vehicle and NASA's first manned X-Plane in 30 years. ESAero is the prime contractor on this unique \$28M IDIQ Phase III SBIR Contact effort to electrify aviation.

Mr. Gibson is a Subject Matter Expert on HEDP and TeDP systems for transformational and transport aircraft and participates in the NASA sponsored TeDP Workshops, NASA/AFRL "LEAPTECH", the Transformative Vertical Flight Workshop, and has been a panel member during innovative TeDP sessions at various AIAA and SAE conferences. He has been invited to submit papers both domestically and internationally to discuss and present ESAero's work in Hybrid Electric. He recently spoke on several AIAA Forum 360 Panels at AIAA Propulsion and Energy 2015, AVIATION 2017, SciTech 2018, AVIATION 2018, AVIATION 2019, Propulsion & Energy 2019, and SAE Aerotech 2019. He is a member of the AIAA V/STOL TC, is Technical Chair for the committee sponsored 2016 International Powered Lift Conference, Transformational Flight PC, and the Green Engineering PC, where he recently concluded 2 years as the Committee Chair. He received his Bachelor's Degree in Aerospace Engineering from California Polytechnic State University at San Luis Obispo.

**Andrew Gibson's Bibliography:**

Borer, N.K., Patterson, M.D., Viken, J.K., Moore, M.D, Clarke, S., Redifer, M.E., Christie, R.J., Stoll, A.M., Dubois, A., Bevirt, J., Gibson, A.R., Foster, T.J., Osterkamp, P.G., "Design and Performance of the NASA SCEPTOR Distributed Electric

Propulsion Flight Demonstrator," AIAA 2016-3920, June 2016

Freeman, J., Osterkamp, P., Green, M., Gibson, A., and Schiltgen, B., "Challenges and Opportunities for Electric Aircraft Thermal Management", Aircraft Engineering and Aerospace Technology, Volume 86, Issue 6, Distributed and Hybrid-Energy Propulsion, October 2014.

Schiltgen, B., Green, M., Freeman, J., and Gibson, A., "Terminal Area Operations for Hybrid Electric Distributed Propulsion", Aircraft Engineering and Aerospace Technology, Volume 86, Issue 6, Distributed and Hybrid-Energy Propulsion, October 2014.

Design Patent for Hybrid Electric Split-Wing "Aircraft" Patent, US D691,547 S.

Schiltgen, B.S., Green, M.W., Gibson, A.R., "Analysis of Terminal Area Operations and Short Field Performance of Turboelectric Distributed Propulsion," AIAA Control #1679521, Empirical Systems Aerospace, Inc., August 2013.

Schiltgen, B.S., Green, M.W., Gibson, A.R., Hall, D.W., Cummings, D.B., Hange, C., "Benefits and Concerns of Hybrid Electric Distributed Propulsion with Conventional Electric Machines," AIAA 2012-3769, January 2012.

Green, M.W., Schiltgen, B.S., Gibson, A.R. "Analysis of a Distributed Hybrid Propulsion System with Conventional Electric Machines," AIAA 2012-3768, Empirical Systems Aerospace, Inc., January 2012.

Schiltgen, B.S., Green, M.W., Hall, D.W., Gibson, A.R., Foster, T., Waters, M., "Split-Wing Propulsor Design and Analysis of Electric Distributed Propulsion," AIAA 2011-224, Empirical Systems Aerospace, LLC, January 2011.

Gibson, A.R., Hall, D.W., Waters, M., Schiltgen, B.S., Foster, T., Papathakis, K., "Superconducting Electric Distributed Propulsion Structural Integration and Design in a Split-Wing Regional Airliner," AIAA 2011-223, Empirical Systems Aerospace, LLC, January 2011.

Gibson, A.R., Hall, D.W., Waters, M., Masson, P., Schiltgen, B.S., Foster, T., and Keith, J., "The Potential and Challenge of Turboelectric Propulsion for Subsonic Transport Aircraft," AIAA-2010-276, Empirical Systems Aerospace, LLC and Advanced Magnet Lab, Oceano, CA, January 2010.

Schiltgen, B.S., Gibson, A.R., Keith, J. "Mission Performance Comparisons of Subsonic Airliners with Current and Future Propulsion Technologies," AIAA 2010-279, Empirical Systems Aerospace, LLC, January 2010.

Hall, D.W., Waters, M., Gibson, A.R., Keith, J., Schiltgen, B.S., Foster, T., "A CESTOL Conceptual Design Process," Cal Poly N+2 NRA Design Process Final Report, June 4th, 2008. Unpublished.