The electric-powered aircraft industry continues to evolve with new vertical flight (eVTOL) and conventional aircraft (eCTOL) in development. New investors and development partners have also appeared, including major automobile manufacturers and the United States Air Force through its Agility Prime initiative.

A number of factors are accelerating the electrification of aviation in Scandinavia and the US Pacific Northwest and British Columbia. For example, the governments of Norway, Sweden, and Finland have set targets for the introduction of electric aircraft for commuter and pilot training flights. And environmentally minded communities in Cascadia (Oregon, Washington and British Columbia) may be among the first to introduce electric seedling seaplane and eVTOL aircraft on short haul overwater routes.

Electric motor technology is undergoing a revolution to support a wide range of electric vehicles. The motors requirements for eCTOL and eVTOL aircraft are significantly different from electric cars and other ground vehicles. Electric motor and eVTOL aircraft developers will discuss the motor technology and performance.

The lower energy and maintenance costs of electric-piloted aircraft make them well suited for inter-city commuter/regional air services. This includes new inter-city services and the revitalization short haul routes abandoned because of rising operating costs. Depending on the stage length and available infrastructure, the routes can be served by high speed eVTOL aircraft (with wings), new clean sheet eSTOL aircraft, and older aircraft retrofitted with battery-electric and hybrid-electric propulsion systems by way of an STC.

Hybrid electric propulsion systems take many forms and a variety of system components are being now applied to electric aviation. The landscape includes piston-electric, diesel-electric and turbo-electric powertrains installed in various configurations in retrofitted and new optimized aircraft designs. Hybrid-electric systems leverage the high energy density of liquid fuel and don’t require electric infrastructure during the start-up phase.

Propulsion Systems – Hybrid Electric Propulsion Systems

 moderator: Yolanka Wulff, CAFE Foundation

Propulsion Sources – Hydrogen

 moderator: Graham Warwick, Aviation Week

Electric aviation provides an opportunity to completely new aviation markets and revolutionize the markets that exist. One of the promising markets for eVTOL aircraft is high density urban areas where surface transportation modes are increasing inefficient. How do you determine which urban markets are the most promising from a customer and investment perspective? And what are the market opportunities in regions with poor transportation connectivity?

 moderator: Anubhav Datta, Univ. of Maryland


 moderator: Bruce Holmes, Skai

The Hydrogen Revolution: From UAV to UAM

 moderator: Alex Ivanenko, Hypion

How We Will Make Aviation Sustainable

 moderator: Valibilitkhoz, Zerovia

Testing and Certification

 moderator: Ken Goodrich, NASA

The certification of electric aircraft powered by battery-electric, hybrid-electric and hydrogen fuel cells presents new challenges as new consensus-based certification standards are adapted. Four leading manufacturers currently flying eVTOL and eCTOL aircraft will share their insights regarding testing and certification.

 moderator: Christine De Jong

Certification of Electric Aircraft vs. What is Really Needed

 moderator: Dana Jensen, Gemini Industries

Tire Tarmac, PippieCam

 Urban Air Mobility (UAM)

 moderator: Todd Hodges, NASA (ret)

VTOL Aircraft History and Design

 moderator: Tine Tomazic, Pipistrel

Flight Testing the eCaravan: The World’s Largest All-Electric Commercial Aircraft

 moderator: Ed De Reyes, Sabrewing

Subrewing’s Rheagal eVTOL Cargo UAV - More Than Just A Cargo Airplane

 moderator: De Ed Reyes, Sabrewing

EVTOL Challenges: Local Considerations and Public Acceptance

 moderator: Ken Swartz, Aeromedia Communications

Sustainable Mid-Mile Logistics with Metro Hop All-Electric Aircraft

 moderator: ESaero and X-57 Integration and Processes to Support Standards, Qualification and Certification

Bruno Membrane, Metro Hop

 moderator: Trevor Foster, ES Aero

Considerations for UAM Community Integration: Opportunities and Challenges

 moderator: Adam Cohen, UC Berkeley

Making the Case for eVTOL Aircraft

 moderator: Marc Ausman, Airflow.aero

X-57 Project Update: Design Considerations for All-electric Propulsion

 moderator: Sean Clarke, NASA

How Electric Aviation Infrastructure has to Integrate with Transportation

 moderator: Darrell Swanson, Swanson Aviation Consultancy

Regional Mobility using Hybrid-electric Propulsion

 moderator: Yolanka Wulff, CAFE Foundation

Sabrewing’s Rheagal eVTOL Cargo UAV - More Than Just A Cargo Airplane

 moderator: Ed De Reyes, Sabrewing

Testing and Certification

 moderator: Yolanka Wulff, CAFE Foundation

Propulsion Systems – Electric

 moderator: Michael Dyment, NEXA Advisors

Electric aircraft are complex systems that can include electric motors, batteries, hybrid generators, energy management systems, cooling systems and lots of wire. What are the system integration challenges and what’s required to achieve aviation level redundancy and safety?

 moderator: Yolanka Wulff, CAFE Foundation

Closing Remarks

 moderator: Michael Friend, Friend.aero

Closing Remarks

 moderator: Yolanka Wulff, CAFE Foundation

Closing Remarks

 moderator: Yolanka Wulff, CAFE Foundation