

EAGLE Quad Charts

Eliminate Aviation Gasoline Lead Emissions (EAGLE)

Pillar A Quad Chart: Business (Fuel) Infrastructure and Implementation



Pillar Objectives

- Evaluate and support program(s) that incentivize fuel producers and distributors, aircraft and engine manufacturers, and GA operators to accelerate development, qualification, deployment, and use of unleaded fuels
- Facilitate policy proposals at the Federal and State level to increase production and distribution – as well as enable and encourage greater use – of commercially viable replacement unleaded fuel
- Facilitate government policy, regulatory proposals and voluntary consensus standards that will support a commercially viable supply chain and quality-focused infrastructure for the deployment of unleaded fuel, including the promotion of free-market competition
- Evaluate Environmental, Social, and Governance (ESG) commitments to help engage additional organizations and investors in this effort
- Support policy and regulatory proposals for maintaining 100LL availability and airport access to ensure safety during the transition across the country for use by general aviation aircraft

Next Steps

- Develop framework to achieve EAGLE objectives and engage stakeholders
- Utilize Deployment Guide and Action Plan as a starting point while keeping in mind the EAGLE initiative is much more comprehensive
- Develop infrastructure database e.g. terminals, refiners, FBOs, aircraft, equipment etc.
- Develop communication channels beyond association members

Pillar Session Outcomes

- Shared awareness and understanding of approach to meet pillar and overall EAGLE objectives
- Stakeholder buy in and engagement going forward

Pillar Session Feedback

- Is it possible to limit lead emissions by leaning the mixture during run-up?
- Are there other approaches to reducing lead emissions during the transition (VLL)?
- Is it possible to reduce the number of flights at airports to reduce emissions?
- Can the FAA provide a tank or truck to an airport where resources are needed to bring an unleaded product to market?
- What is the focus of the pillar? Is it to advocate for resources for airports? If that is the focus, how will it ensure that municipalities do not compete with FBOs?
- Is it possible to modify a refinery to supply 100LL?
- Is there a process that will assess the components of a new fuel?
- What process is needed to achieve acceptance of STC fuels by the engine manufacturer/OEM requirements?
- What transparency and understanding of fuel components?



Pillar B: Research, Development and Innovation – Quad Chart

Pillar Objectives

- Understanding of R&D that is needed across all pillar activities across several stakeholders
- Focus is to facilitate transition to unleaded replacement fuel by mitigating impacts
 - Address safety & technical challenges of high-performance engine use of unleaded fuel and any deployment issues
- Effective and timely FAA certification essential to deployment of solutions

Pillar Session Outcomes

- Shared awareness and intended scope of R&D and innovation pillar activities
 - Mitigate potential impacts of UL fuel so that it can be a potentially viable replacement
- Share FAA UL fuel R&D program
- Solicit stakeholder inputs & engagement

Next Steps

- Identify interested stakeholders to participate
- Establish pillar working group & meeting schedule
- Identify R&D technology and process areas likely needed based on known fuel candidates
- Develop proposed workplan activities

Pillar Session Feedback

- Critical milestone is to identify potentially viable UL fuel replacement(s) for 100LL ASAP
 - Understanding of the safety & technical impacts that need to be mitigated (such as materials, operational procedures, etc)
- Initial R&D to address ability for high-performance engines to operate safely on a lower octane fuel



Pillar C Quad Chart: Unleaded Fuel Evaluation and Authorization

Pillar Objectives

- Provide Status of current PAFI efforts and fleet authorization process
- Describe Fuel Authorization Paths: PAFI and STC
- Discuss how PAFI fits into the EAGLE framework
- Provide opportunity for open dialogue

Pillar Session Outcomes

- ✓ Shared awareness and understanding:
 - ✓ PAFI and its relationship to Fleet Authorization and EAGLE.
 - ✓ The 2 Fuel Authorization Paths
 - ✓ Benefits of Fuel Authorization Pathways
- ✓ Engagement of stakeholders in continuing dialogue.

Next Steps

- Stakeholders identify interest in participating in this pillar
- Identify scope and timing for future Pillar working sessions and working groups
- Continue to progress PAFI testing and Fleet Authorization process
- Re-engage Technical Advisory Committee
- Coordinate with R&D and Regulatory Pillars on planned UL Fuel evaluation activities

Pillar Session Feedback

- Investigate options to accelerate PAFI testing, without compromising safety
- Explore gap analysis between STC and PAFI Process, based upon applicable data
- Continue outreach, education and awareness
- Transparency is key



Pillar D Quad Chart: Regulation, Policy, and Programmatic Activities

Pillar Objectives

- Understand the government regulatory process
- Understand policies that affect funding for airport fueling infrastructure
- Understand programmatic activities that reduce or eliminate reliance upon leaded aviation gasoline
- Education, awareness, training, and outreach

Pillar Session Outcomes

- Provided overview of EPA activities focused on lead
- Promote understanding of EPA/FAA Regulatory Authorities and processes underway
- Discussed programmatic activities that reduce reliance upon leaded aviation gasoline
- ASCENT Research Center of Excellence
- Experience with public-private partnership to develop clean technologies
- Transition of flight schools to unleaded fuels
- Identified airport fueling infrastructure needs

Next Steps

- Report out on progress for:
- EPA/FAA regulatory processes
- Policy updates that affect funding for airport fueling infrastructure
- Inform on flight school transitions to unleaded fuels
- Update on ASCENT activities
- Update on possible public-private partnerships to develop clean technologies

Pillar Session Feedback

- EAGLE activities will inform the rulemaking process. Any rulemaking will not affect safety.
- Need to provide rulemaking status to ensure regulatory certainty, noting that it is a deliberative government process.
- Concerns about mis-fueling, address going forward.
- Concerns about replacing TEL with another toxic chemical.
- Improved communication across all stakeholders is needed, including communities and state/local governments.
- Expanded grant funding eligibility is needed to support fuel infrastructure and fuel trucks necessary for the transition

Thank You for Attending!

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