DEUSA Fleet Success Stories: Missoula Montana Airport

Location: Missoula, MT
Fleet type: Light-duty gas, diesel and electric vehicles

Narrative: Missoula Montana Airport (MSO), which serves approximately one million travelers annually, has been actively exploring opportunities to expand the use of zero-emission vehicles and equipment across its operations.

Through funding support from the Montana Department of Environmental Quality (DEQ), the airport has already begun electrifying portions of its ground support equipment fleet, including the deployment of electric belt loaders (pictured below) and a pushback tractor (also pictured on the following page). A unique advantage at MSO is that the airport directly manages its ground handling operations—unlike many airports where this is contracted out—allowing greater control over equipment procurement decisions and enabling faster adoption of electric alternatives.

Building on this early success, MSO is evaluating additional electrification opportunities across multiple operational areas. These include:

- A larger electric pushback tractor capable of servicing larger aircraft
- Electric transit and shuttle buses for passenger and staff movement
- Light-duty electric work trucks, such as the Ford F-150 Lightning, for maintenance and operations
- Electrification of mowing and airfield maintenance equipment

To support this transition, airport leadership has also been pursuing infrastructure development. MSO participated in a federal Charging and Fueling Infrastructure (CFI) grant application that would have significantly expanded both DC fast charging and Level 2 charging capacity on-site. While the application was unsuccessful, it reflects the airport's long-term vision to support not only fleet electrification, but also rental vehicles, airport visitors, and public charging needs.

Looking ahead, MSO is exploring innovative energy strategies to further reduce emissions and enhance energy resilience. The airport is planning to lease land and water rights to support future solar generation and potential hydrogen (H_2) production. There is also interest in partnering with Mountain Line to explore hydrogen applications for regional transit buses, creating potential synergies between airport operations and local transportation systems.

Electricity service at the airport is currently split between NorthWestern Energy and Missoula Electric Cooperative, which presents both opportunities and considerations for future infrastructure expansion and energy planning.

According to Dan Neuman, Manager of Business Development at MSO, the airport remains highly interested in pursuing additional FAA funding opportunities, including the Voluntary Airport Low Emissions (VALE) program, to continue advancing zero-emission equipment and infrastructure.

Overall, MSO is positioning itself as a regional leader in airport sustainability by taking a proactive, systems-level approach to electrification—integrating vehicles, infrastructure, and future clean energy production into a cohesive long-term strategy.

Outputs & Outcomes

Outputs

- Deployment of electric belt loaders and a pushback tractor through DEQ funding
- Evaluation and planning for expanded electric fleet, including buses, trucks, and additional ground support equipment
- Participation in federal funding applications to expand EV charging infrastructure
- Exploration of on-site renewable energy and hydrogen production opportunities

Outcomes

- Reduction in greenhouse gas emissions and diesel fuel consumption from ground operations
- Increased operational control over electrification due to airport-managed ground handling services
- Improved readiness for large-scale fleet electrification through planning and partnerships
- Strengthened regional collaboration on clean transportation, including potential hydrogen integration
- Increased visibility of airport-led sustainability initiatives in Montana

Best Practices & Lessons Learned: MSO's experience highlights the importance of aligning fleet electrification with long-term infrastructure and energy planning. By integrating vehicle deployment with charging, renewable energy, and emerging technologies like hydrogen, the airport is building a flexible and future-ready system.

Key lessons include:

- Airports that manage their own ground handling operations have a significant advantage in adopting electric equipment
- Early engagement in federal funding opportunities (FAA VALE, CFI, etc.) is critical, even when applications are unsuccessful
- Electrification planning should extend beyond vehicles to include charging infrastructure and energy supply strategies
- Partnerships with local utilities and transit agencies can unlock additional opportunities and shared benefits
- Considering multiple technology pathways (battery electric and hydrogen) can provide flexibility for different use cases