

APRIL 2024

AILL: DENVER FEDERAL CENTER

Developing a whole-building approach to sustainable operations



Denver Federal Center
Lakewood, CO
4M ft² of space
90 buildings
670-acre campus
28 federal agencies
6,000 employees

The Denver Federal Center (DFC) has been at the forefront of testing emerging technologies, from finding better ways to treat cooling tower water to improving the insulation of our windows.

This tradition continues with the Applied Innovation Learning Lab (AILL), supported by the Inflation Reduction Act. The AILL team takes a whole-building approach to sustainable operations and is playing a key role in helping the GSA achieve its ambitious net-zero goals. At the DFC, we're testing multiple technologies to support building and fleet electrification efforts.

Piloted Technologies at the Denver Federal Center AILL

COMPLETED EVALUATION 053 »

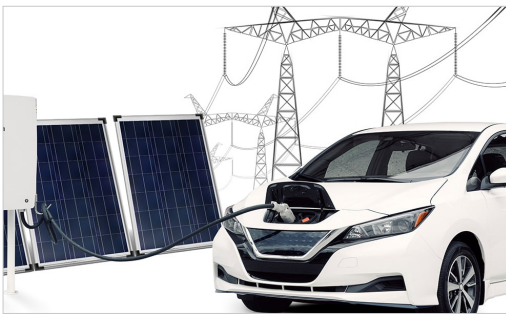
Automated envelope sealing provided by AeroSeal



- 53% increased airtightness, from 0.23 CFM/ft² to 0.11 CFM/ft²; meets GSA P-100 Tier 3 performance standards
- 71% reduction in HVAC capacity requirements
- 1-day installation

ONGOING EVALUATION

Bi-directional EV charging provided by Fermata Energy



- Turns EVs into energy storage assets
- Increases resilience by using EVs to power building loads or send energy back to the grid
- Reduces electricity costs with demand charge management

ONGOING EVALUATION

Renewable, transportable EV charging station provided by Beam Global



- Reduces EVSE infrastructure costs and can be easily moved to match fleet needs
- No required construction permitting, associated trenching, switch gear upgrades, or interconnection agreements
- Can be independent or grid-tied



The Center for Emerging Building Technologies' three programs, Green Proving Ground (GPG), Pilot to Portfolio (P2P), and Applied Innovation Learning Lab (AILL), enable GSA to make sound investment decisions in next-generation building technologies based on their real-world performance.