



division of
**Fleet
Operations**



Advanced Technology Vehicle (ATV) Rollout Plan

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Advanced Technology Vehicles (ATVs)

Introduction

This document will guide the Division of Fleet Operations (DFO) and its customers on how, where, and when to start replacing internal combustion engine vehicles with ATVs responsibly.

What are ATVs?

With manufacturers moving to ATVs, especially in their light-duty passenger offerings, DFO is letting their customers know that these newer types of vehicles are becoming more commonplace now and especially in the future.

These vehicles are either powered in part by electricity or solely by electricity. Examples include:

- Toyota Prius (Hybrid)
- Toyota Prius Prime (Plugin-Hybrid)
- Chevy Bolt (Battery Electric Vehicle)

Why the transition to ATVs?

Both Federal and State vehicle purchasing mandates bind DFO. If DFO disregarded these mandates purposefully, heavy fines could be levied upon the State and DFO. Along with mandates, the Governors One Utah Roadmap has goals to move the state fleet to ATVs.

2014 Utah Code 63A-9-403 requires:

- 50% or more of new or replacement division-owned state vehicles that are motor vehicles used for the transportation of passengers need to be Alternative Fueled Vehicles (AFVs) or ATVs

[Utah Code](#)

1992 EPA Act Requires State Fleets to purchase 75% of new light-duty vehicles to be advanced technology or Alternative Fueled.

- A federal civil fine of \$8,916 per violation
- A federal criminal fine of up to \$10,000 per willful violation
- A federal criminal fine of up to \$50,000 per repeated violation

[About EPA Act](#)

The October 2021 Governor's One Utah Roadmap

Take meaningful, long-range action to combat poor air quality and climate change.

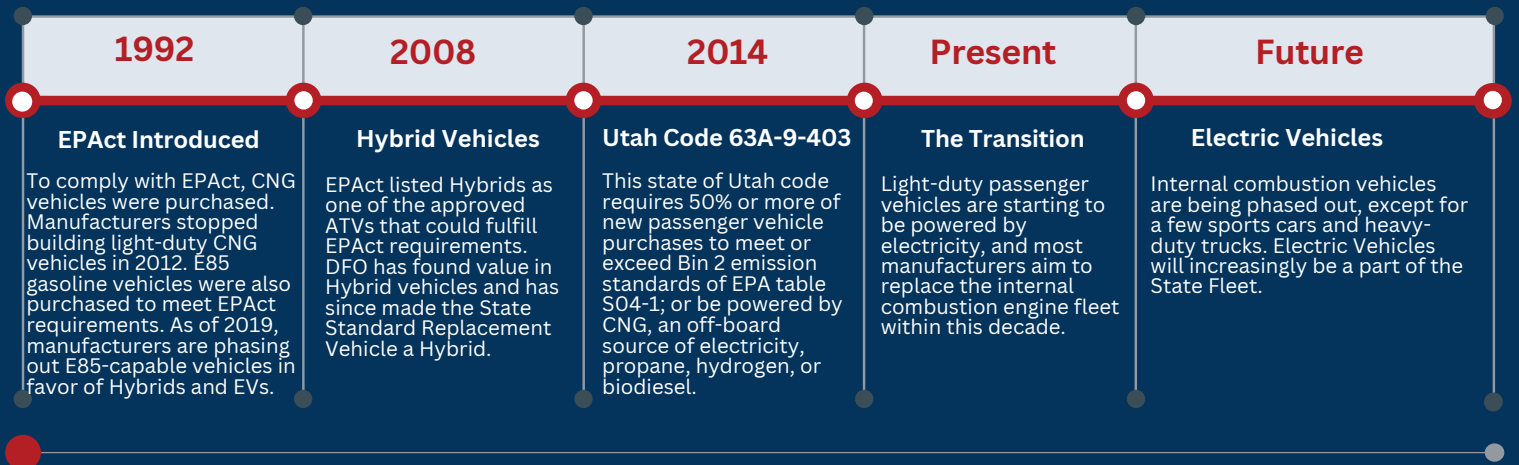
- Continue converting state fleets to zero and low-emission vehicles and utilizing Tier 3 fuels
- Continue investing in electric vehicle charging stations

[One Utah Roadmap](#)



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Alternative Fueled and Advanced Technology Fleet Vehicle History *Complying with State and Federal Vehicle Mandates*



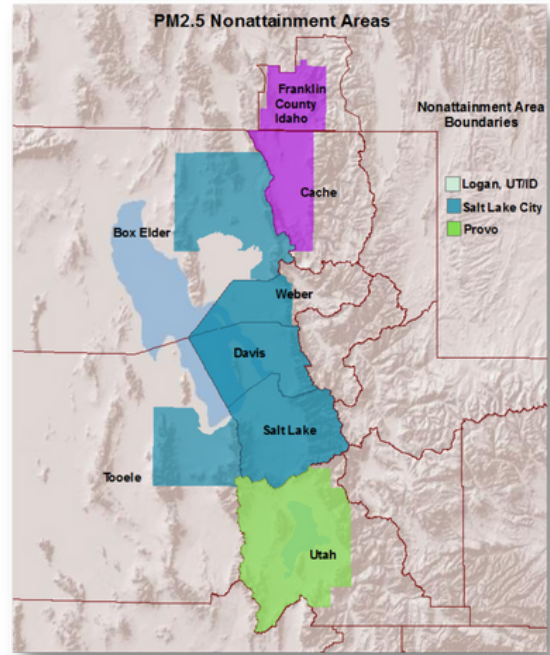
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Where to Place ATVs

According to Utah's Division of Air Quality's Environmental Interactive, counties of the state that do not conform to PM2.5 standards are currently in areas of:

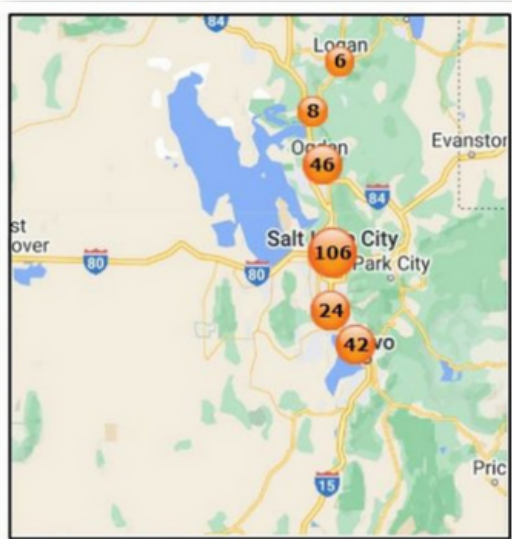
- Cache
- Box Elder
- Weber
- Davis
- Salt Lake
- Utah

DFO believes the best impact for reducing tailpipe emissions is to place ATVs in these counties.



[DEQ's Interactive Map](#)

State of Utah Charging Locations



The Utah Department of Government Operations and UDOT operate ~**232 ATV charging ports**. In theory, ~232 ATVs could be implemented into the State fleet. Most of these charging locations are found in northern Utah, from Provo to Logan. Some Electric Vehicle Supply Equipment (EVSE) are also available in select rural locations.

The "ATV Purchasing Flow Chart" can be referenced when replacing older vehicles with ATVs.

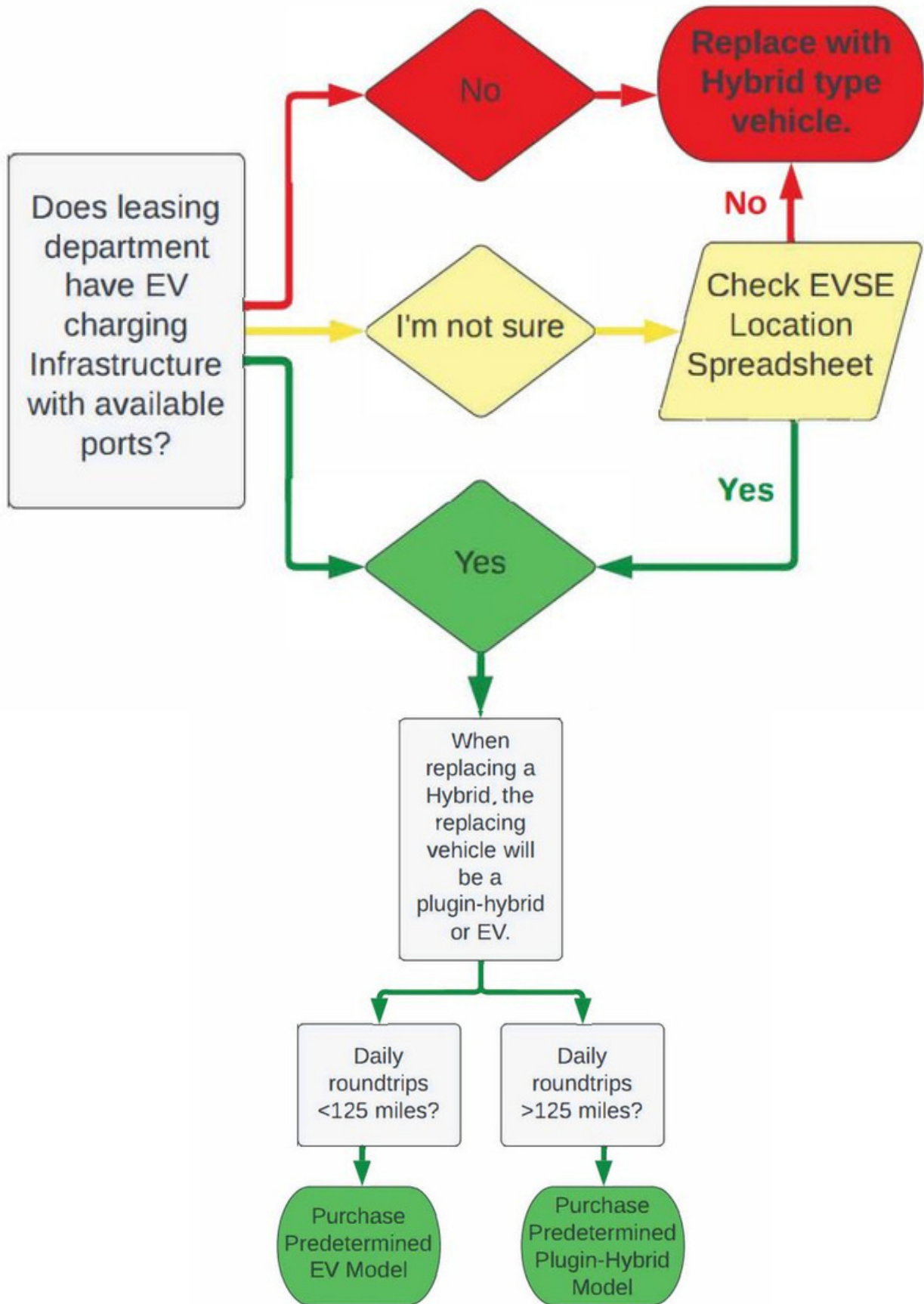
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Choosing the State Standard ATVs

It's important to note that with all the ATV models available, it will be imperative that DFO choose a passenger car, SUV, and truck that will bring the best total cost of ownership. Input from our customers will be gathered so the right vehicle can be purchased and they can perform the missions they are tasked to accomplish.



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Telematics

Because ATVs are not yet commonplace in the State fleet, telematics will be required add-ons so that DFO can obtain the following metrics that will help with running and maintaining a fleet of AFVs:

- State of charge
- Temperature
- Battery degradation
- Charging KWH
- Understand the real-world range
- To monitor ATV electric use to ensure overnight plugging into ports is happening.
- To obtain data regarding energy added from non-charging (regenerative braking).
- Fault codes
- Is driver behavior shortening range?
- Monitor energy added from off-site charging
- Maintenance codes
- Repair diagnosis



[Photos courtesy of Geotab](#)



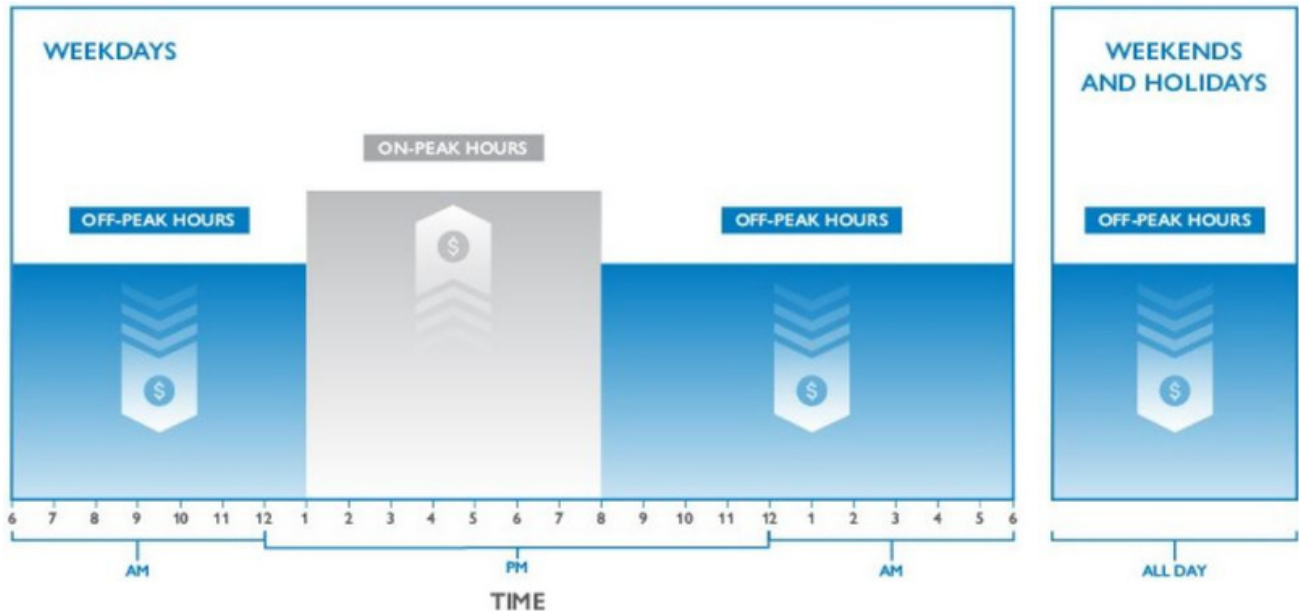
Take Home & Commute

At this time, take-home and commute use should be postponed until DFO understands the normal operation of running an electric fleet.

By 2025, DFO plans to implement take-home and commute use with electric vehicles.

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Avoiding Peak Demand Charging Fees



Courtesy of Rocky Mountain Power

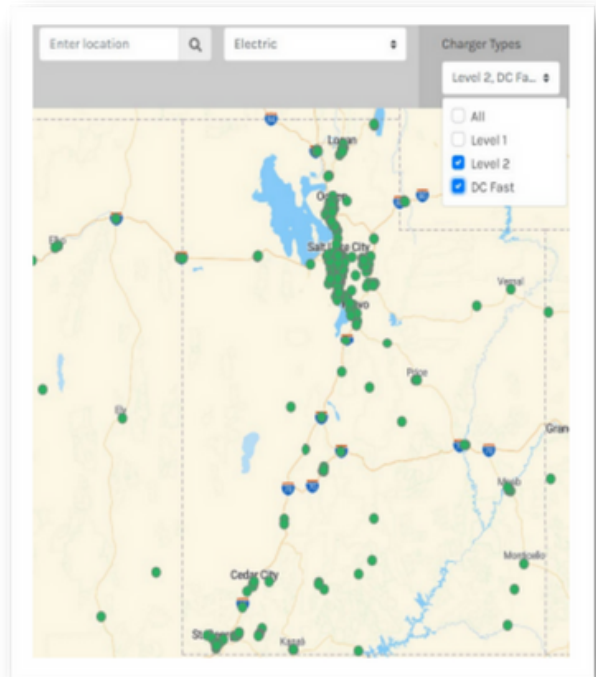
Charging a fleet of vehicles during peak times will cost the State excess funds and negate the potential cost savings of owning an ATV fleet. This concept should always be at the forefront of drivers' and EVSE managers' minds.

- Smart chargers can be programmed to charge at the most cost-effective times.
- Dumb chargers may need to have placards or decals displayed telling drivers when or when not to charge.
- Some ATVs can be programmed to charge at user-predetermined times, and this programming should be done before the vehicle leaves DFO.

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Non-State Public Charging Locations

ATVs are useless if there aren't chargers to fuel the vehicles. Fortunately, the private sector has been providing chargers for the public to use for some time now. The link below will provide the user with the locations of private-sector charging stations. This site is an excellent reference to use when traveling through the state or across the country.

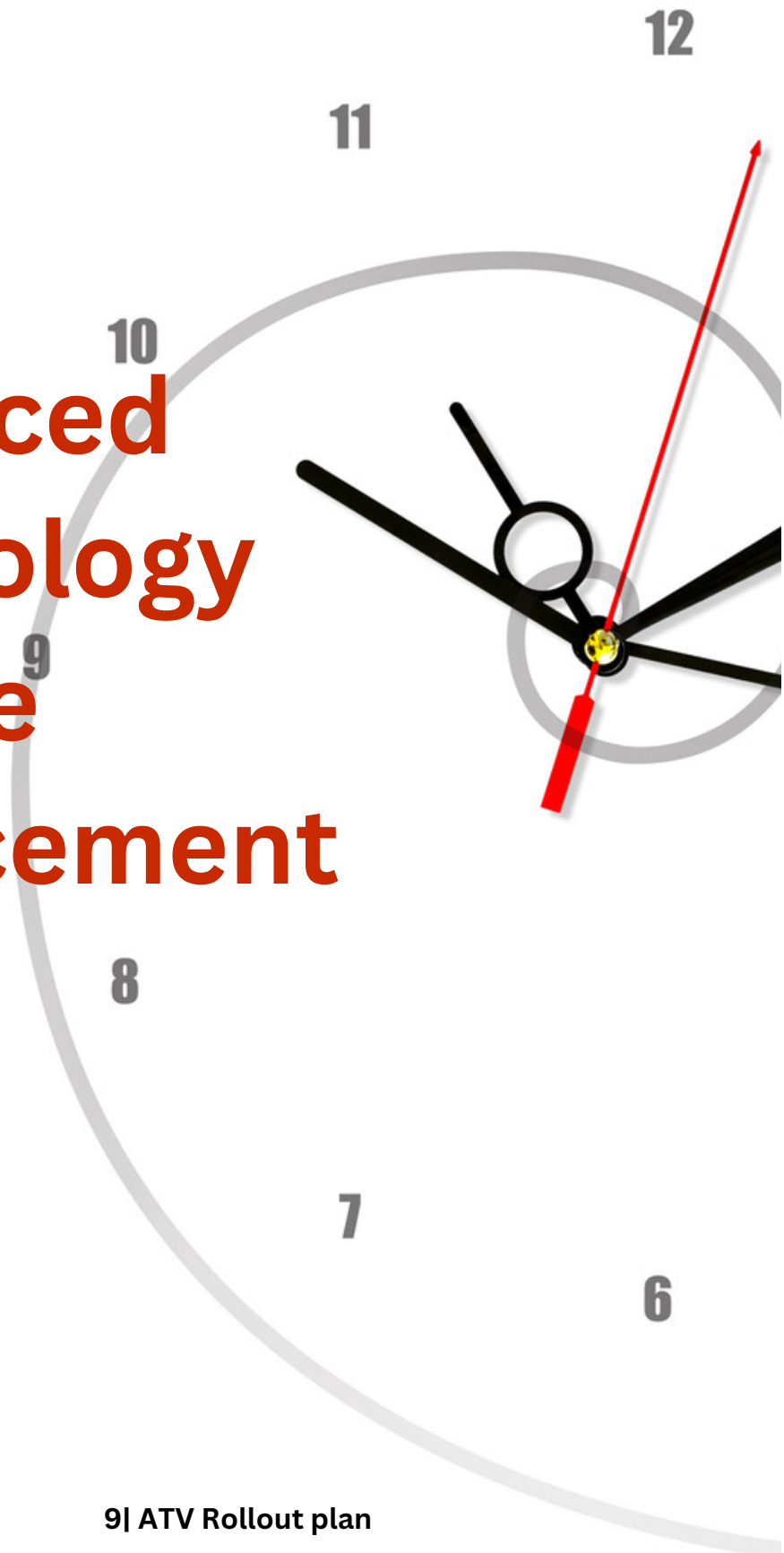


[Public Charging Locations](#)

DFO Internal Goals to Reduce Excess CO2

-  Rid the fleet of light-duty vehicles older than MY 2007.
-  Collaborate with other states on how to implement ATVs.
-  Plant one tree for every DFO employee every year around Arbor Day.

Advanced Technology Vehicle Replacement Goals



ATV Rollout Plan

**Contingent on vehicle manufacturers being able to build and supply vehicles for DFO.*

Calendar Year 2023

- Any hybrid passenger vehicle is to be replaced by Plugin Hybrid if a charger is located at the home base.
- Purchase 10 passenger Battery Electric Vehicles (BEVs) to replace outgoing hybrids.

Calendar Year 2024

- Any hybrid passenger vehicle is to be replaced by Plugin Hybrid if a charger is located at the home base.
- Purchase 20 passenger BEVs to replace outgoing hybrids.

Calendar Year 2025

- Any hybrid passenger vehicle is to be replaced by Plugin Hybrid if a charger is located at the home base.
- Purchase 30 passenger BEVs to replace outgoing hybrids.
- Purchase 5 BEV trucks to replace on-road trucks.

Calendar Year 2026

- Any hybrid passenger vehicle is to be replaced by Plugin Hybrid if a charger is located at the home base.
- Purchase 30 passenger BEVs to replace outgoing hybrids.
- Purchase 5 BEV trucks to replace on-road trucks.

Calendar Year 2027

- Any hybrid passenger vehicle is to be replaced by Plugin Hybrid if a charger is located at the home base.
- Purchase 30 passenger BEVs to replace outgoing hybrids.
- Purchase 5 BEV trucks to replace on-road trucks.

(For every ATV DFO orders, a charging port will need to be available. Keep a running count of vehicles at each location to avoid getting the vehicle-to-charging port ratio out of a 1:1 balance.)



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