STATE OF HAWAIʻI | KA MOKUʻĀINA O HAWAIʻI
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES | KA ʻOIHANA LOIHELU A LAWELAWE LAULĀ

AUTOMOTIVE MANAGEMENT DIVISION

FAQ

1. How do fuel costs compare?

BEVs are usually cheaper to "fuel." In places like Hawaii, this depends on electricity rates but can still favor BEVs—especially with solar integration.

- Electricity costs less per mile than gasoline
- Costs are more stable (less price volatility)

2. Are BEVs really cheaper to maintain?

Yes, generally. BEVs have fewer moving parts and eliminate:

- Oil changes
- Fuel system maintenance
- Exhaust system repairs

They also reduce brake wear due to regenerative braking. This is why studies (like DOE/ Argonne) show lower per-mile maintenance costs for BEVs.

3. What maintenance do BEVs still require?

Maintenance isn't zero—just simpler and less frequent. BEVs still need:

- Tire rotations/replacement
- Brake fluid service
- Cabin air filters
- Coolant (battery thermal system)
- Suspension components

4. Do BEV batteries need to be replaced often?

No, not typically. Battery replacement is expensive, but failures are rare within normal fleet life cycles.

- Most BEV batteries last 8–15+ years
- Warranties commonly cover 8 years / 100,000+ miles

5. Do BEVs save money overall?

Often yes, over the vehicle lifecycle. Savings come from:

- Lower fuel costs
- Lower maintenance costs
- Potential incentives

However, results depend on:

- Usage patterns
- Electricity vs fuel prices
- Infrastructure costs

6. How do tires compare between BEVs and ICE?

BEVs may wear tires faster due to:

- Higher torque
- Heavier weight

This can offset some maintenance savings slightly.

7. What happens if a BEV runs out of charge?

- It cannot be easily "refueled" like ICE
- Requires roadside charging or towing (flatbeds)

Planning and charging access are critical.

8. Are BEVs safe?

Yes.

- Must meet the same safety standards as ICE vehicles
- Lower fire risk per mile than gasoline vehicles (based on available data)
- Different emergency response procedures (battery fires require special handling)

9. Bottom Line

The core tradeoff:

- **BEVs:** Lower operating & maintenance costs, cleaner, simpler—but require charging infrastructure and planning
- **ICE:** More flexible and familiar—but higher ongoing fuel and maintenance costs