1 Why I chose PHEV over EV

- Range anxiety
- Driving needs (lots of daily/short trips)
- Cost: Expectation that EVs will come down in cost in a few years
- Familiarity of driving experience (lower learning curve)
- Availability of model type (wanted SUV)

2 Why I chose Toyota RAV4 Prime (2021 / Used):

- Reliability / Quality (Toyota brand)
- Range (68km on EV only)
- Size, comfort, features, driving experience
- Availability (got lucky)

3 Toyota RAV4 Prime (PHEV)

- Range = 68km (function of temperatures/season, speed)
- Fully charged in ~2.5 hours (Level 2 charger)
- Can also be charged in ~12 hrs on regular 20A 3-prong plug!
- Partial charging when engine running and regenerative braking

4 My Experience / Highlights:

1. Seamless & automatic transition from EV to HEV
2. City driving, commuting and Westboro > Gat Park are all 100% electric
3. 1500 – 2000 km on a tank of gas!
4. Stress free longer trips
5. Conscience-free driving: Ontario is 92% zero carbon electricity
6. Defrosting windshield requires gas engine to run (to generate sufficient heat)a

Bought ($500) and had electrician install it

Comparison: PHEV vs EV

Aspect	PHEV	EV
Range	- Combines electric range with gasoline for extended total range.	- Limited to battery capacity, though newer models have significantly improved range.
Charging	- Less reliance on public charging infrastructure due to hybrid capability.	- Requires access to charging stations, especially for long trips.
Emissions	- Lower emissions than traditional cars but higher than EVs when using gasoline.	- Zero tailpipe emissions.
Fuel Cost	- Lower than conventional cars but can be higher than EVs depending on electricity and gasoline costs.	- Generally lower than PHEVs and traditional cars, depending on local electricity prices.
Maintenance	- More complex due to having both an electric motor and an internal combustion engine, potentially higher costs.	- Fewer moving parts than PHEVs or traditional cars, generally lower maintenance costs.
Initial Cost	- Typically less expensive than EVs due to smaller battery packs.	- Generally more expensive upfront, but costs are decreasing as technology advances.
Tax Incentives	- May qualify for smaller tax incentives compared to EVs.	- Often qualifies for higher government subsidies and tax incentives.
Performance	- Performance can vary widely; generally good due to instant torque of electric motor.	- Often has better performance due to instant torque and sometimes higher horsepower.
Convenience	- More flexible for longer trips due to hybrid operation.	- Requires planning for long trips to ensure access to charging stations, which can be inconvenient.
Environmental Impact	- Reduces environmental impact compared to gasoline cars but less so than EVs.	- Lower overall environmental impact, especially if charged from renewable energy sources.