Insights from a 2018 Qualitative Analysis of 4,000 Consumer Comments on Electric Vehicles

McMASTER INSTITUTE FOR TRANSPORTATION & LOGISTICS

Quinn Hachey, MSc
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Introduction

• This research was guided by Grounded Theory methodology

• Several iterations of the coding process were used to develop a final list of unique Themes

• Comments represent an unfiltered view of what participants wanted researchers to know about EVs and related topics following the survey
Survey Comments

Uncoded Comments

- Coded Comments: 4,034
- Uncoded Comments: 585

Coded Comments by Respondent Age

- 55-64
- 45-54
- 35-44
- 18-34
- 65+

Insights from Consumer Comments on EVs
Sentiment Towards EV Purchase

Insights from Consumer Comments on EVs
Sample Comments

Interested

“I plan on seriously considering one for our next purchase!”

“[My next vehicle will be a BEV because we must absolutely reduce our dependence on fossil fuels.]”
Sample Comments

Conditional Interest

“I'd like to buy a full electric vehicle, but cost, range, and infrastructure so far prevent me from doing so.”

“I would love to buy one but concerned about the distance a charge will go... If I could get one at slightly more than conventional [cost] and it had at least 400-500 km range and even if it were a small SUV I would certainly purchase one.”
Sample Comments
Future/Wait & See

“I hope in the future to own one but I don't see it happening in the next 5 years.”

“I'm not opposed to electric vehicles; I'm just waiting until the technology is tried and true.”
Sample Comments

Not Interested

“I'm not willing to do without heat in my car and not wanting to worry if I will be stranded somewhere...Until this issue is resolved I have no interest whatsoever...

“will never buy. Am opposed to all this expensive climate change nonsense pushed by left wing advocates.”

“maybe it's age but I don't like the idea of totally electronic cars...there is something reassuring about being able to carry a jerry can of gas when you go into remote regions...”
Top Ten Most Mentioned Themes

1. High Purchase Price: 736
2. Proximity to Public Charging: 379
3. Range Anxiety: 361
4. Electricity Cost: 210
5. Rural Suitability: 208
6. Suitability for Long Trips: 200
7. Way of the Future: 133
8. Eco-Friendly: 140
9. Long Charging Time: 121
10. Need Improvement: 120
Top 20 Most Mentioned Themes

1. Battery Disposal & Recyclability: 106
2. Lack of Knowledge: 98
3. Reliability concerns: 64
4. Cost of Replacement Battery: 65
5. Impractical: 68
6. Battery Longevity/Lifespan: 71
7. MURB Charging: 87
8. Mining & Battery Production: 88
9. Dirty Power Generation: 89
10. Lack of Information/Marketing: 98
11. Battery Disposal & Recyclability: 106
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16. Lack of Knowledge: 98
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18. Cost of Replacement Battery: 65
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Mentioned Environmental Concerns

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Attitudes About EV Incentives

- **Pro-incentive**
- **Larger Incentive**
- **Anti-Incentive**
- **Lack of incentive**
Sample Comments

Pro-Incentives

“Governments should subsidize vehicles so as to make the cost of an EV comparable to an ICE.”

“They're getting closer - hopefully the government keeps the incentives up for a bit longer.”

Larger Incentives

“Electric and Hybrid cars would be a hot buy if more cost effective and there were more Government incentives.”
Sample Comments

Anti-Incentive

“Government subsidies towards the purchase of an electric vehicle should be stopped immediately and new legislation should be enacted to prevent any future subsidies...”

Lack of Incentives

“I like the idea of electrical vehicles, but unfortunately in Alberta there is no incentive for this technology yet.”
Mentioned Grid Implications

- Grid Capacity: 52%
- Grid Outages: 22%
- Green Energy Drawbacks: 14%
- Anti-nuclear: 7%
- Cost of Grid Improvements: 5%

Insights from Consumer Comments on EVs
Interesting and Infrequently Mentioned

Distrust of Dealerships/Sales people (3)

“I would like to see to it that dealers are not charging more for maintenance since electric cars are cheaper to service.”

HFCEV Preference (34)

“we should be investing in hydrogen powered vehicles not electric battery powered vehicle”
Interesting and Infrequently Mentioned

Dislike how Incentives are Applied (4)
“government incentive on electric vehicles is after sales taxes, should be changed before sales taxes as the $14,000 incentive is actually overstated by the 13% sales taxes”

Distrust of EV Pricing (3)
“[I think the dealers are taking advantage of the government subsidy to boost the price of electric vehicles]”
Interesting and Infrequently Mentioned

High Maintenance/Repair Costs (18)

“I think if something goes wrong the expense to repair would be higher than normal auto repairs—the more technology, the more complicated the repairs.”

Limited Availability (26)

“I am interested in an electric vehicle but I find they are not readily promoted or easily accessible to purchase.”
Insights from Consumer Comments on EVs

**Reduced Gas Tax Revenue (8)**

“Government will need to replace the tax revenue from oil production and gasoline taxes. No free ride with electric vehicles.”

**Charge port Vandalism (1)**

“Also with the possibility of vandals damaging the charging capabilities rendering your car helpless I would worry”
Selected Comments by EV Owners

“...90% of our household trips are made with our EV, and when it needs to be replaced, it will certainly be for another EV. Not necessarily with more range, since the 200Km is fully meets our needs.”

“...it is clear that the price of EVs is the main obstacle to access, without the subsidy I could not afford the costs. I like driving an electric car, I hope to never go back, I made a lot of compromise to have it, I did not choose the fast charging option to lower the monthly payments.”
Selected Comments by EV Owners

“[The main reason for my purchase of an EV is the undeniable performance of this propulsion type in the city: almost total silence, linear acceleration, no engine vibration, braking system rarely solicited.]”
“[The risk of having a dead battery while stuck in traffic worries me. Reduced battery range in winter is irritating. I worry about the reduction in range with the aging of the battery. Trips outside my region (e.g. 500 km) seem complicated to me. I enjoy driving an EV and appreciate its reduced environmental impact.]”
Conclusion

Why does this all matter?

• There is a general positive and optimistic view about EVs among the comments
• It is apparent in many comments that misconceptions about EVs remain a major barrier
• Price, public charging and range anxiety are top of mind however, a breadth of additional barriers also exist (e.g., winter performance, availability of AWD, towing capacity, rural suitability, etc.)
Conclusion

Why does this all matter?

• It is often a combination of barriers that restrict EV interest and adoption
• Although price concerns can sometimes halt further consideration
Conclusion

Why does this all matter?

• There appears to be considerable opportunity to increase EV adoption with federal policies
• There is considerable interest among respondents but also concerns about EV barriers
• This demand could be unlocked by addressing these barriers and dispelling misconceptions
• Clean energy policies must also be used to ensure that EVs maintain a “green” image
Conclusion

Why does this all matter?

• A respected and reliable source of information is required to educate the public about EVs
• A lack of knowledge and information about EVs were both raised in the consumer comments
• Uncertainty and misinformation regarding potential “EV motivators” such as charging and maintenance costs were also raised