

Electric Vehicles: Kilometers Travelled and Charging Habits - ISRAEL Quick Survey

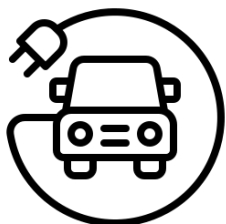
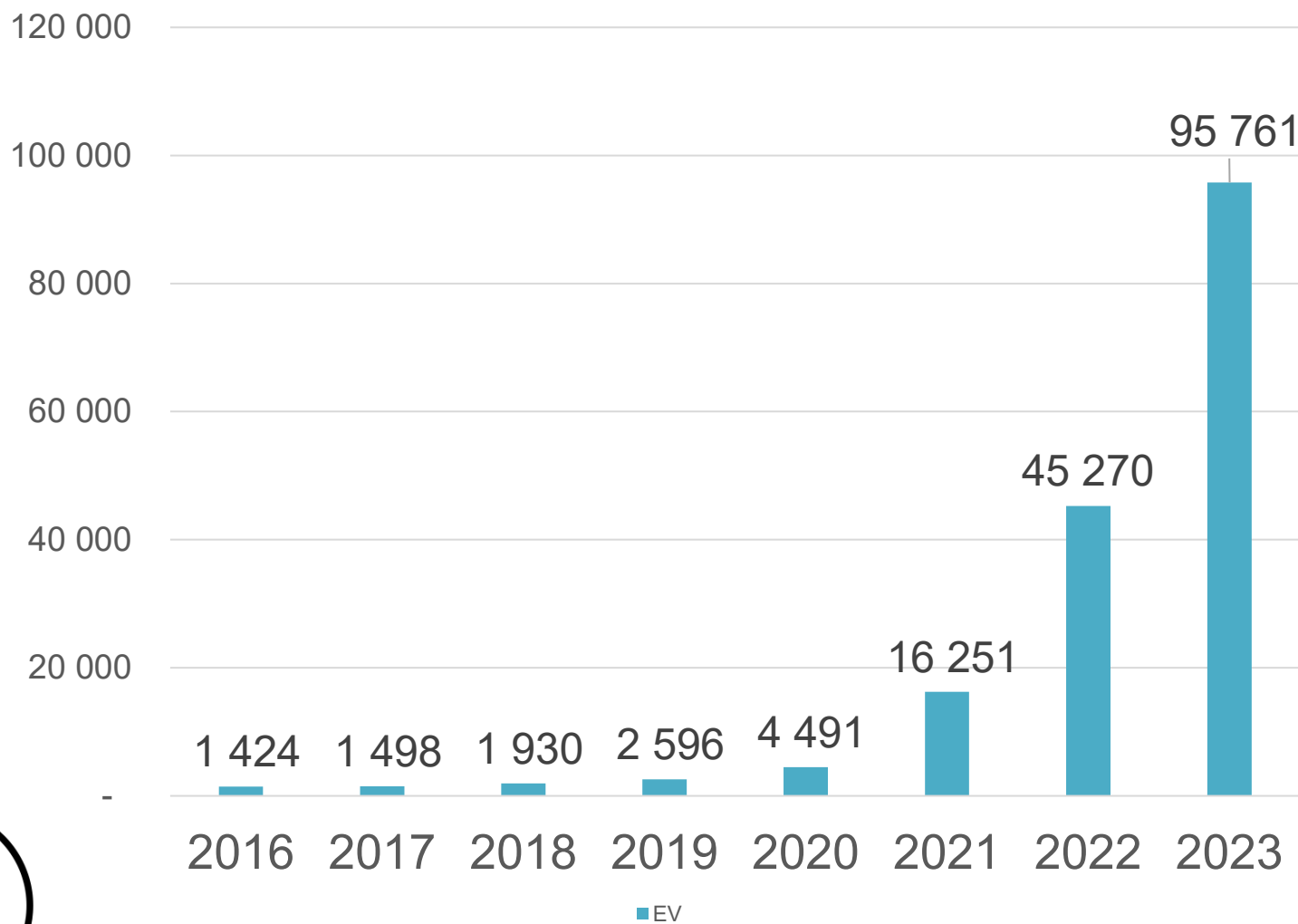
ITF
10th Statistics Meeting

Orit Yalon-Shuqrun

April 2024

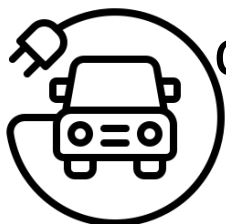


Number of Electric Vehicles 2016-2023



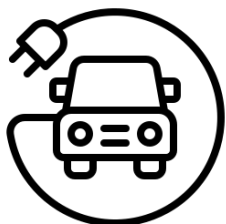
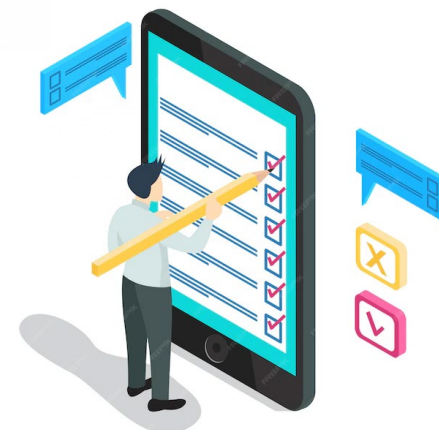
Background

- Kilometers travelled calculated yearly from recording at the annual inspection
- New privately-owned private cars: first inspection at three years old
- Majority of EVs are new
- No data on kilometers travelled of EVs
- After receiving several requests a short survey was planned
- The Energy Ministry requested questions on charging habits

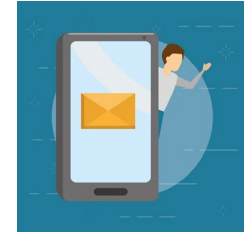


Survey Method

- A quick and cheap solution
- SMS to all EV private car owners (no sampling)
- Data source: Vehicle Registry
- Self-response through link in SMS or Website
- Also promoted on social media
- 3 Reminders
- Subjects: current km, charging habits, availability and status of public charging stations



Questionnaire- 1



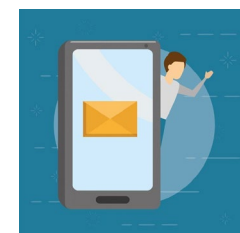
1. How many kilometers has the vehicle traveled in total, from the day of first use until today?

2. How often do you charge your vehicle, at each of the types of stations below – (always, often, sometimes, rarely):

- Home charging station
- Work charging station
- Fast charging public station (DC)
- Slow charging public station (AC)
- Other private station (neighbor, family,...)



Questionnaire- 2



3. Usually, when you get to a slow public charging station it is:

Available –yes/ no

In working condition –yes/ no

4. Do you think there is a shortage of these types of public charging stations: slow charging - yes/no fast charging - yes/no

5. In order to improve the service, we would be happy to receive comments regarding the use of charging an electric vehicle (difficulties, challenges, suggestions or recommendations): free text



Response rate

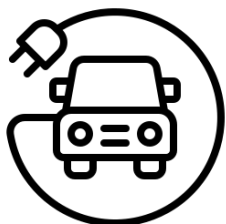


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66,000 electric private cars at time of planning (9.2023)

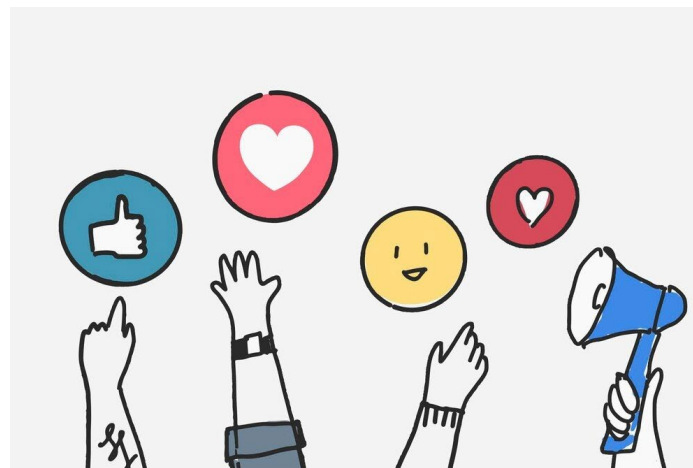
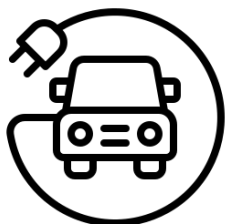
Date	Response by link	Response by social media	Total
Feb 6- First message	7,515	700	8,215
Feb 14- Reminder 1	11,030	851	11,881
Feb 20- Reminder 2	13,197	899	14,196
Feb 29- Reminder 3	14,646	920	15,566

24% response rate!!!



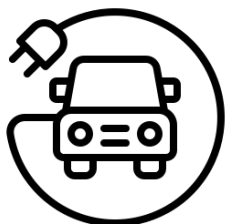
Public Reactions

- Hotline for public inquiries- 170 calls: refuse to answer, can't connect to link, wrong number, no longer owns car, my ex owns the car and not me, etc.
- Media: car magazines, mostly sympathetic
- Free text question: 56% filled out free text
 - Need to expand placement of public charging stations
 - Increase enforcement of “no parking” at charging stations
 - Do not add km tax



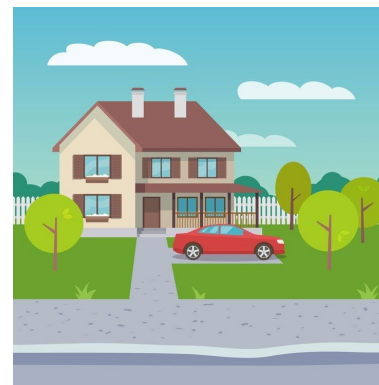
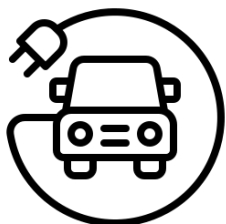
Data Analysis

- Editing and computing
- Link to admin files
- Data on the owner (residence, age)
- Data on the vehicle (model, age)
- The technical aspects of the survey

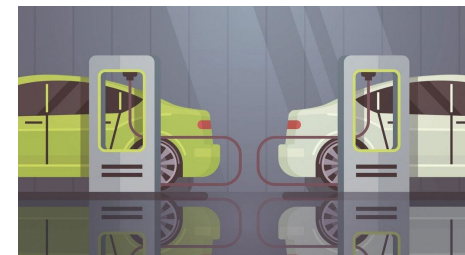


Provisional findings-1

- Electric private cars drive on average 20,850 km per year compared to 14,600 km per year for other power types → 42% more!!!
- 88.2% charge frequently at home charging stations
- 30.2% charge frequently in fast public charging stations
- 13.5% charge frequently in slow public charging stations
- 13.9% charge frequently at charging stations at work
- 8.8% charge frequently at neighbors/friends

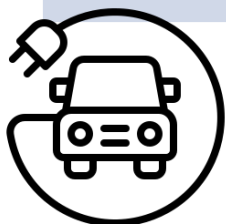


Provisional findings-2



When you arrive at a public charging station, it is:

	Fast charging station	Slow charging station
Operational and available	39.3%	43.4%
Operational but not available	51.0%	39.8%
Not operational	9.6%	16.8%



Provisional findings-3



There is a lack of the following public charging stations:

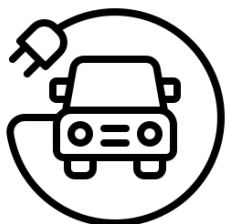
	Reported a lack*
Fast public charging station	64.5%
Slow public charging station	4.2%
Both types of public charging stations	28.4%
There is no lack of public charging stations	2.9%

*Out of those that use public charging stations



Conclusions

- Survey Conducting:
 - Using a novel SMS self-response method yielded a decent response rate that provides decisions makers with important data
 - Take into consideration system capacity
 - Promotion in social media helped marginally
- Provisional data:
 - EVs are bought by people who drive more
 - 90% have home charging stations
 - 97.1% reported a lack of public charging stations





Thank you

