

Should we use Electric Cars?

Use the grid opposite to produce a case study on whether we should use electric cars – Try to design your report for a teenage science magazine. It should be factual but also colourful and engaging.

Use these websites to gain information to make your points.

https://www.youtube.com/watch?v=17xh_VRrnMU

<https://www.youtube.com/watch?v=6RhtiPefVzM>

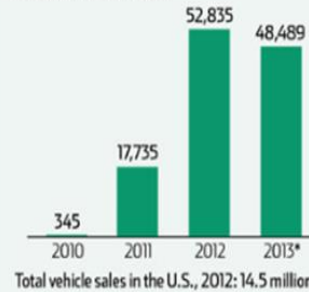
<https://www.theautochannel.com/news/2019/04/25/661653-electric-vehicles-unclean-every-speed-electric-cars-dont-solve-automobiles.html>

https://www.youtube.com/watch?v=0_RRKePSjL4

https://www.google.com/search?q=electric+cars+infographic&rlz=1C1GCEA_enGB917GB917&source=lnms&tbn=isch&sa=X&ved=2ahUKEwIu8IzT1qDxAhViBWMBe4yAgsQ_AUoAXoECAEQAw&biw=1024&bih=600&safe=active&ssui=on

THE ELECTRIC MARKET

Sales of all-electric and plug-in hybrid electric cars in the U.S.



*Through July

Source: Electric Drive Transportation Association

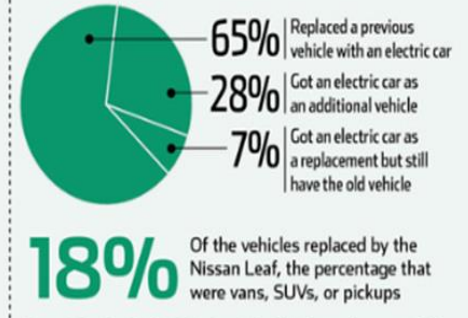
WHERE THEY ARE

Markets with the biggest share of U.S. registrations for new plug-in electric vehicles, January-May 2013



THEIR PLACE IN THE FLEET

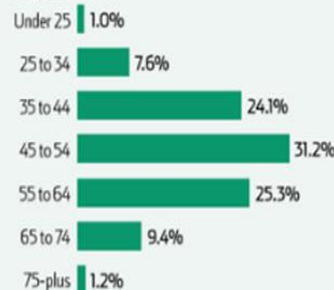
Among households with Nissan Leafs, the percentage that:



Source: University of California, Davis, analysis of data from various sources, 2011

WHO'S DRIVING | Demographics of participants in the EV Project (owners of Leafs and Volts)

Age



Average age of all new-car buyers (2011): 51

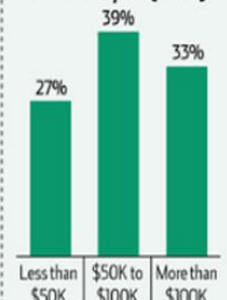
Sources: EV Project; Polk/IHS and Edmunds.com (income and age data for all new-car buyers)

Household Income

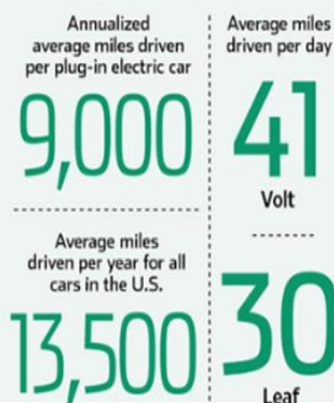


Nearly four out of five owners in the EV Project have incomes of more than \$100,000, compared with one in three for all new-car buyers

Household Income, all new-car buyers (2012)

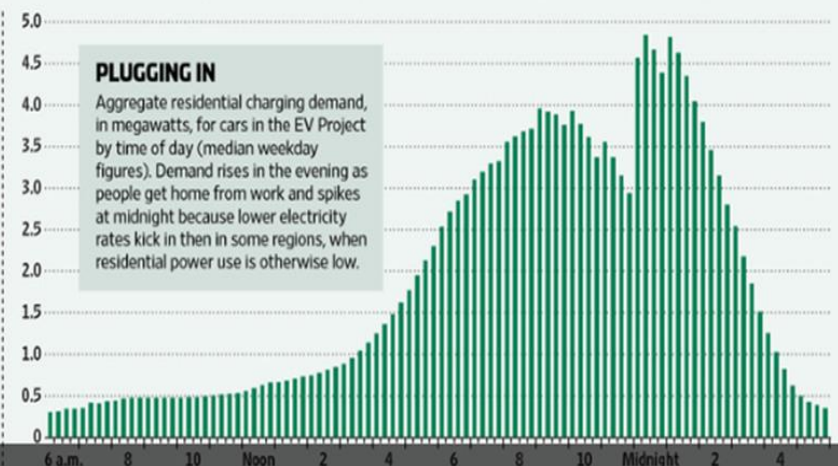


HOW THE CARS ARE USED



PLUGGING IN

Aggregate residential charging demand, in megawatts, for cars in the EV Project by time of day (median weekday figures). Demand rises in the evening as people get home from work and spikes at midnight because lower electricity rates kick in then in some regions, when residential power use is otherwise low.



Source: EV Project; U.S. Department of Transportation

A Finding sources of information	
QUESTION – You have decided on a question you wish to investigate	○
Contents - You have produced a full list of contents for your report.	○
<ul style="list-style-type: none"> During this section you will have collected relevant sources of information from different places. You must have made notes on the reliability of the sources and the validity of their point of view. You must make a list of where you found your information. The publication, the author/organization and the date it was produced. 	○ ○ ○ ○

B Science Explanations	
Introduction	○
<ul style="list-style-type: none"> You have briefly described the issue and highlighted the key arguments. 	○
Science	○
<ul style="list-style-type: none"> You have used your knowledge to explain the science involved in the study. You have reviewed the evidence to demonstrate a full understanding of the issues. 	○ ○

C Conclusions and recommendations	
Supporting evidence	○
<ul style="list-style-type: none"> You have listed the evidence that supports the one side of the argument. You have explained how this evidence supports the argument You have described the validity and reliability of the authors of the evidence. You have used named quotations in my report 	○ ○ ○ ○
Evidence against	○
<ul style="list-style-type: none"> You have listed the evidence that supports the other side of the argument You have explained how this evidence supports this argument You have described the validity and reliability of the authors of the evidence. You have used named quotations in my report 	○ ○ ○ ○
Conclusion	○
<ul style="list-style-type: none"> You have recommended a course of action which is based on a conclusion. You have clearly linked your conclusion to the evidence presented in your report. You have compared both sides of the argument. 	○ ○ ○

A References	
<ul style="list-style-type: none"> You must make a list of where you found your information. The publication, the author/organization and the date it was produced. 	○

1. Very important – see on next page
2. List of all your references – who wrote them, date, publication, a comment on their reliability – use the sources issued but try and find some for yourself

3. Use the science sheet (next page) to explain all the key science facts

4. For Yes we should use electric cars– points of view for your question
5. Against – No we should not use electric cars - points of view against your question

6. **Conclusion** Some people think
 For example (2 examples)
 I know they think this because they have said
 I think they are reliable. I think this because.....
 Other people think
 For example (2 examples)
 I know they think this because they have said
 I think they are reliable. I think this because.....
 Overall I would recommend that.....
 I think this is the best argument because.....
 I think we should I think this because