

## **Assignment for Student One-Pager** **“The Future of the Automobile”**

**Topic:** Electric Mobility – What is Missing?

**Due Date:** January 21, 2011 / 8pm

**Description:** A recent poll shows that by far the majority of Americans believe that it is important to expand the use of electric vehicles. However, analysts expect that electric vehicles will have only a 2% to 3% share of the new-car market in 2020 (see also next page).

The question arises what is missing to turn electric mobility into success – or even more general, are electric vehicles the answer to the problems that individual mobility is facing today?

Describe your own understanding, concerns, and questions regarding electric mobility and why you think electric vehicles will or will not be a game changer for individual mobility. Please reference pertaining papers, articles, sources as there is fit. Think about the following:

- What challenges faces the individual when switching to electric vehicles?
- What challenges face corporations when planning products?
- Are we really sure that electric vehicles are “the better car”?
- Is the technology already mature enough for mass market?
- Which role does the government / administration play?

And finally please answer the question:

- What needs to happen so that electric vehicles become a “no brainer”?

**Format:** The papers serve as a preparation for the seminar discussions to capture students’ thoughts, expectations, and concerns regarding the selected topic. While the papers should reflect the students’ own understanding of the matter, references that were used should be listed (e.g. research, statistics, news...). All students draft their paper individually; it is not a group work.

The papers are due at the date and time stated above to allow for review and to include them into the preparation for the seminar discussions. Students should indicate on their paper if they do not authorize the use of their paper in class, further research, or discussion with industry partners.

**Credit:** Students earn one point per paper towards the required two (2) points for successful completion of the course CS523 / ME302. The papers need to be sent to beiker@stanford.edu by the due date indicated above.

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## Are Americans Willing to Try Electric Cars?

The Wall Street Journal - December 1, 2010

By Jonathan Welsh

While most Americans say electric vehicles are an important way to reduce our dependence on foreign oil, relatively few are willing to try them. That's one of the findings in a survey by Market Strategies International, a research and consulting company with a focus on several industries including energy.

On the positive side, the number of respondents who said they see themselves driving an electric car 10



About 13% of U.S. drivers say they can see themselves driving electric cars within 10 years. – Getty Images

years down the road is still higher than some of the more optimistic estimates coming recently from industry analysts and car-company officials. This is a promising sign for car makers like Chevrolet and Nissan as they prepare to roll out new electric models. The Chevrolet Volt and Nissan Leaf are expected to go on sale later this month, with more models coming in the next two years.

According to the firm's Energy + Environment, or E2 study, 70% of people surveyed said they thought the expanded use of electric vehicles is a vital part of strategies to reduce the use of fossil fuels. However, only 43% said they could see

themselves driving an electric car in 10 years. Within that group, 13% said they were "very likely" to buy and electric car.

Jack Lloyd, vice president of the research company's energy division, says he puts a lot more stock in the people answering "very likely" because they are typically far more likely to follow through. Still, 13% is a promising forecast for the electric-vehicle segment. Analysts have said electrics will have 2% to 3% of the new-car market and even Carlos Ghosn, head of Nissan and Renault and a big proponent of electric vehicles, has predicted a 10% share by 2020.

If car makers want electric vehicles to grow beyond their current novelty status, and become a reliably profitable part of the business, they will have to help consumers get over range anxiety and other worries. Lloyd says 28% of the people surveyed said range and battery life were the main obstacles keeping them from considering electrics. Another 20% were concerned about the availability of charging stations and 9% were bothered by the high cost of the vehicles.