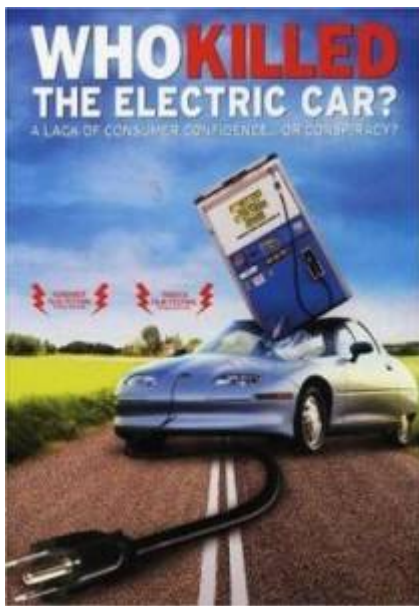


WHO KILLED THE ELECTRIC CAR?

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Who killed the electric car? ([Who killed the electric car?](#)) is an interesting documentary that recounts one of the biggest disagreements surprising between politicians, businessmen and the market in the race for sustainability and technological development.

The documentary can be viewed [with Spanish subtitles via Motorspain.com and Youtube](#) and narrates how the various political, business and market forces managed to repeal the [ZEV mandate](#) from the State of California - which required manufacturers to sell a minimum of zero-emission cars - and how this led to the recall and destruction of hundreds of electric vehicles in a mysteriously bold way. Although the documentary does not end up unmasking the real culprit for the withdrawal of the mandate, nor for the destruction of the vehicles, it does point to some possible causes: lack of market, limited political support, various business pressures, battery technology immature...

https://www.youtube.com/watch?feature=player_embedded&v=nsJAlrYjGz8

The most striking thing about this documentary is that it shows how the comings and goings between the North American automobile industry and both the California and state governments ended up scaring Asians and pushing them to invest heavily in electrical technology. We all know the end of history: the arrival of [hybrid models](#) such as the [Toyota Prius](#) and [its market success](#), and the [collapse of the American car industry](#).

The documentary should be a must-attend class in all economic development and innovation courses. It is not difficult to pick up some observations that are widely applicable today in similar battles:

- When there is no clear winning technology **you have to carefully weigh the risks of betting on a single winner**. Governments can support development programs of a certain *technological neutrality* and companies can advance simultaneously in several technological options through a varied portfolio of R&D projects. In the documentary, he opts for the electric vehicle, later for hydrogen, to finally end the support for hybrid technology. A balanced strategy from the start might have been more fortunate.

- The power of **legislation to support innovation is enormous but it can also block it**. In this case, California's electric car legislation aroused enormous criticism among the business mass, but it could also, if it had been sufficiently stable, have saved the American automobile industry from its subsequent debacle.

- **Politicians don't know about technology**. There is nothing more to see in the documentary [George Bush](#), so President of the USA, and [Arnold Schwarzenegger](#), as Governor of California, betting on the hydrogen technology as the technology destined to take over from fuel engines. This technology is still very far from its actual implementation phases due to the enormous cost of transportation and storage that it entails.

- **But sometimes companies by themselves are not capable of demonstrating sufficient leadership** to start a technological revolution. The need for public action is evident, and if it had

been continued, perhaps GM, Ford and other American giants would now be in a different situation.

- The **world is global**. No company can relax in domestic markets as others can come from abroad to steal your cake. The American automotive companies did not want to face the technological challenge of reducing emissions and as a result were technologically advanced by the Asians.

- **Trends cannot be underestimated**. In the documentary you can see American executives mocking small and eco-efficient cars: "*Americans prefer them big*". There is a global trend towards efficient vehicles, concern for sustainability is a reality and they should have paid attention to it.

- **The sailing-ship effect can play bad plays** . Companies must bet on ambidextrous strategies in which they improve mature technologies (more efficient combustion cars) and in turn bet on new technologies. An exemplary case can be found in the hybrid cars developed by Toyota. The Americans preferred to continue on the mature technologies, and although they perfected them, they did not reach the efficiencies of the new hybrid models.

- **Political lack of coordination can bring down an industry**: In the video you can see the lack of coordination and confrontation between the State of California and the federal government. Territorial lack of coordination seriously damaged the competitiveness of the American automobile industry.

Even though the documentary is now more than four years old, it offers some very useful lessons regarding both political and business strategies for technological transitions. Let's take note not only for the development of the electric car in Spain but for other ongoing transitions such as renewable energy, sustainable transport, biotechnologies, digital content...

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