

The 'driving' force behind electric vehicles

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Cultural differences between countries run right to the heart of government, thereby influencing technological innovation. This is reported in a comparative study by David Calef and Robert Goble published recently in the journal *Policy Sciences*. The authors outline efforts taken throughout the 1990s by both the US and French governments to adopt legislation fostering technological innovation to improve urban air quality by promoting clean vehicles, specifically electric vehicles (EVs). The study highlights the differences in approach and policy-making style by both governments and how this might have affected the final outcome.

In the Californian example, mandates were instituted that required zero-emission vehicles (ZEVs) to make up a certain percentage of car production and sales, with fines imposed for not reaching targets. Both the oil and auto industries opposed this and lobbied heavily against it. There was intensive media coverage of the debate and environmentalists spoke out on both sides. All parties were locked in a confrontational relationship fueled by a longstanding mutual mistrust. Public participation was openly sought.

The French mandate, however, was characterized by heavy government involvement. Much of the interaction between government and businesses was conducted 'behind closed doors', free of public scrutiny. Unlike in the US, no group ever complained that EVs were a problem. A treaty was made between the state-owned electricity company, the auto industry and local administrative institutions to contribute to the development of the EV. No penalties were imposed for failing to meet

targets. Subsidies were provided to encourage individuals to buy EVs.

The diversity in the policies adopted reflect both practical and cultural differences between the USA and France. American cities are characterized by urban sprawl (which makes EVs difficult to use), the gasoline tax is low and the environmental lobby is political and vocal. France's cities, conversely, have a typically dense layout making EVs more practical. The nuclear power industry has little opposition and has excess capacity to provide electricity. Awareness of green issues in France is low and the high gasoline tax is a substantial source of revenue for the government.

In the end, the different ways used to achieve the same goal had no effect on the outcome. Both countries failed to reduce urban pollution in line with targets. However, the stricter legislation in the USA compelled the automotive industry to come up with an alternative solution which it did in the form of hybrid cars. This is typical, the authors observed, because in the US, technological solutions are preferred over behavioral change. In France, technological solutions are strongly related to national prestige as a form of cultural elitism. France failed to make this a 'grand project' and the lack of public awareness may have failed to drive it forward.

This comparison shows that individual cultures still have 'standard operating procedures' which reflect 'deep-rooted national political and social cultures' despite increasing globalization. It also suggests that governments should take into account the cultural dimension when promoting policy change.

Citation: Calef D and Goble R (2007). The allure of technology: How France and California promoted electric and hybrid vehicles to reduce urban air pollution. (*Policy Sciences*, Vol. 40, No. 1, DOI 10.1007/s11077-006-9022-7)

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