Example of research paper on history on the fossil fuel industrys influence on ca...

Business, Industries

Today there are two different headlines over the news that seem to give opposite information. One common headline tells us that peak oil has been reached and oil is not going to last forever. The story under the headline usually gives information about living a more environmentally sustainable lifestyle by switching to alternative fuels. On the other hand, there are other headlines declaring that there is plenty of oil because petroleum companies are taking advantage of deep sea drilling and sand tars. Our science courses tell us that there is only so much fossil fuel because the amount depends upon how many fossils have been converted to petroleum. The environment is polluted and a lot of the pollution is generated by fossil fuels. Common sense seems to say that moving to alternative fuels is a good idea but there is a real argument going on in the public discourse about whether to do it or not.

Because the positive news stories on fossil fuels have a lot of quotes from petroleum industry employees; a person has to wonder if the petroleum industry has had any influence on the type of cars being used now. In other words, has the fossil fuel industry used its influence to manufacture hydrocarbon combustion engines for transportation instead of electric cars? The pollution from traffic is very bad in places like Los Angeles and Houston. What influence has the fossil fuel industry had on building more highways instead of more mass transit? This paper looks at the possibility that the fossil fuel industry has been influential in stopping mass transit projects including trolleys, railways and buses since the early 1900s.

This paper begins with information from the 1800s and the start of mass transit then moves on to explain Edison’s and Ford’s attempt to start cleaner

and healthier transportation in the USA. A discussion of the car manufacturer’s interference with mass transit in the 1940s is included. The decrease in streetcars as the increase in automobiles is also discussed and the growth of private car ownership is noted. The paper ends by looking at the status of fossil fuel industries compared to renewable energy source industries.

1800s

Turner has written about the history of electric vehicles in the USA and particularly in North Carolina. He notes that the words ‘ streetcars’ and ‘ trolleys’ can be used interchangeably (4). The 1850s saw the largest cities in the USA with mass transit systems more developed than in today’s cities. There were the street railroads which were horse led cars moving on tracks which carried 20 to 30 passengers per car. During the 1870s the steam powered cable cars were introduced. These were the forerunners of the cable cars that are still famous in San Francisco. By 1890 there were twenty eight US cities using cable cars including both Chicago and San Francisco. Changing the power from steam to electricity was a primary goal of Edison and his laboratory workers. One of Edison’s lab assistants organized the Sprague Electric Railway and Motor Company for building electric railroad systems. In 1988 he had finished a huge project (for the time) in Richmond, Virginia. He and his company had built a railway system that was a great improvement over the steam locomotive. There were 12 miles of track, grades of up to 8 percent, “ overhead electrical wires, a central station

power plant, and forty trolley cars, each powered by two motors and connected to overhead power by a pole” (Sprague 3).

Boston soon switched to electricity to replace its 8, 000 horses used for power. More than 200 of the new systems were installed by 1890 and from that time to the 1920s the business kept growing. Cities with populations of 10, 000 people or over had electric streetcar systems. Interestingly the fare was 5 cents a person, the state regulated the citizens and the employees were working 7days a week at low wages. (Turner 2-4)

Edison and Ford

Black started his book the Internal Combustion: How Corporations and Governments Addicted the World to Oil and Derailed Alternatives by explaining the attempt by Thomas Edison and Henry Ford to offer the USA an alternative to the dangerous and polluting gas burning car. In 1914 they were working on a project to invent and distribute alternative transportation in the form of electricity (Black 2-3). In the early 1900s electric cars, small trucks and taxis were being used in cities across the whole nation. The success of electric over fossil fuel energy was enough to make some businessmen angry enough to start the Lead Trust. Here is how Black describes the Lead Trust and its corruption plan to sabotage the use of electricity for fuel and for electric batteries.

This corruption infected all who came close after the nineteenth-century bicycle monopoly teamed up with the emerging twentieth-century electric-battery monopoly in league with Wall Street’s most rapacious stock manipulators. Called the Lead Trust, this cartel tried to control all

transportation in America and eventually the world – not for the good of mankind, but for the betterment of their private accounts. (Black 3)

The Lead Trust battled ads by Edison and Ford with their own public relations campaign. They suggested that people should not have to drive heavy cars big enough to carry batteries. They also raised doubts about the safety of people dealing with batteries on a daily basis maybe, they suggested, electric batteries were too dangerous for regular people.

End of Electric Railways

Greenhouse: The 200 - Year Story of Global Warming by Christiansen (1999) explains the way General Motors (GM) started battling against electricity-run transportation. In 1936 the National City Lines was a holding company GM organized in order to get rid of electric railways so GM could sell the buses it manufactured that ran on diesel. It also had another mission and that was to eventually get rid of the buses so people would need to purchase private cars. GMs partners were Firestone Tire and Standard Oil of California. The National City Lines had already destroyed the use of electronic rail systems in “ Fresno, San Jose, and Stockton, National City began to acquire and dismantle part of Pacific Electric (Christiansen 140). The success in California of the National City Lines meant that the city of Los Angeles (LA) needed cars and highways. The trend for more cars and more highways has lasted there until now in 2012.

The GM successes impressed the other car manufacturers, Ford and Chrysler. The competitors of GM started breaking up clean energy railways and trolleys, too. Christiansen reported that the car manufacturers’ work had

eliminated all of LA’s rail tracks; in fact, out of “ 3, 000 trolley cars” the city had not a single one in the city by 1945 (140).

On the other hand Slater claims that the story of GM destroying the public transportation of LA is an urban myth. He does not argue about GMs introduction of buses with diesel fuel being done to make people want to get rid of them due to the bad diesel pollution. Slater argues that if environmental regulations were less “ onerous” or oppressive that the buses would have replaced streetcars even earlier with or without GMs activities. Slater says that GM was thinking towards the future when it replaced the electric streetcars with buses. Even though there was a conspiracy that was not important; Slater suggestion is that GM was just practicing good business.

Meanwhile Turner discussed the situation in North Carolina which was different because GM did not buy up any trolley lines there Turner suggested that “ the biggest (at first unrecognized) threat to streetcars, especially during the decade of the 1920s was the proliferation of automobiles, buses (often operated by streetcar companies), and construction of paved highways” (4).

Rise of Private Cars

Connecticut is another example of the success of electric cars over the use of steam powered rail. “ By 1900 passenger traffic on Connecticut’s trolleys exceeded the state’s steam railroad traffic by 20 percent” and the same trend was taking place in Massachusetts (Black 195). In 1913 the Public

Service Corporation of New Jersey carried about 400 million passengers per year in its 2, 500 streetcars. (Cudahy 91) Despite these impressive numbers both Black and Stewart point to the year 1914 and the fire that destroyed Edison’s extensive laboratories was the when the end of the electric street car began. This seems to have been the beginning of the dirty tricks that ended the success of electricity as the fuel of mass transit. It stopped the whole idea of mass transit by advertisements that romanticized the ownership of a private car. For example starting in the 1920s owning a car became essential to social mobility because it was the superficial, outward expression of acceptance into society. (Cray 236-237) GM lost about $65 million in 1929 when it started targeting the trolley systems. (Black 196-198)

Table 1 shows the increase in cars that were privately owned from the year 1900 to 1980. The increase during the 1900s is astonishing. In 1900 the number of ‘ privately owned automobiles was calculated to be 8, 000 but by 1980 the number was calculated at
121, 600, 000. The 1930s during the Great Depression there was a dip in the rate of increase in private car ownership but even then the numbers increased from 1930 to 1940. The biggest increase took place from 1960 to 1970.

Government Assistance

Roberts has calculated the amount of direct subsidies that fossil fuel industries received from the government based on data from Management Information Services, Inc. (MIS). MIS evaluated transactions between 1950 and 2010 including research and development (R&D), tax policy-credits,

regulation, disbursements, government services and market activity. The fossil fuel industries listed were oil, natural gas and coal. The total transactions of the fossil fuel industries were compared to the alternative fuel sources of hydro, nuclear, renewable and geothermal powers. Roberts pointed out that according to the data the three fossil fuel industries have benefited from 70 percent of the incentives while the other alternative sources were given only 30 percent. Renewable energy which is considered a sustainable energy only received 10 percent of the total. The fossil fuel incentives added up to $594 billion in subsidies received over the sixty years researched. (Roberts grist. org)

But Roberts also pointed out that indirect subsidies add up to a lot more and have more impact on tax payers' budgets. He describes (a) the amount of public health costs due to both water and air pollution, (b) the national security costs trying to protect overseas oil sources in other countries. Roberts described research by an economist which demonstrated that " coal generated electricity imposes more in public health costs than the electricity is worth on the market." Roberts also pointed out that the demand for fossil fuels has been the center of the building of the US infrastructure. " For every dollar we spend maintaining and building new car-and-highway-centric infrastructure, we lock in demand for oil" (Roberts grist. org). The US infrastructure is estimated to be $6 trillion and was built with a basic assumption that oil would always be ' cheap.' Plus the infrastructure needs $1. 6 trillion a year in oil to feed the addiction of American culture to oil. Roberts says the infrastructure can be considered to be the auto, road,

sprawl and empire of the USA in all 50 states and in bases around the world. Roberts made the point that the citizens of the US need to break their bad habits and stop demanding oil. If people really want to make a difference and face the fact that oil is not forever, then they need to make some life style changes. (Roberts grist. com)

Conclusion

Evidently GM and other car manufacturers wanted to sell as cars to private owners as possible no matter what the obstacles. More private cars meant that the fossil fuel industry could make better profits than mass transit offered. This research has shown that over 100 years of US growth has relied on an energy source that is unreliable in several ways. First of all it is not easy to produce any more. Also its use causes medical problems and wars. The arguments for using alternative energy sources should be easy to win. The problem is that people have not thought about how tied to oil so much of daily life has become. Trying to change and asking other people to change is not easy. One important argument can clearly be made and that is that fossil fuel industries have been making out like bandits. In fact there is a lot of evidence that they have broken laws and that corruption is part of the success of the fossil fuel industry’s success in stopping successful mass transit projects.

Clearly the fossil fuel industry has been influential in stopping mass transit projects including trolleys, railways and buses since the early 1900s. Car manufacturers became part of the fossil fuel industry and used many

methods to increase the manufacture of hydrocarbon combustion engines for transportation instead of electric cars

People can feel empowered by this research in a way, because they can choose to change their daily habits to stop their personal reliance on fossil fuels. And they can work to change public policy to start building infrastructure that relies on fossil fuels. This work could include making sure regulations of the fossil fuel industry are taken seriously Also renewable energy sources need to be given advantages.

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