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The Future of Gas Prices in California

I. Introduction

Gas prices in California rank as among the nation’s highest, which are largely attributed to taxes at approximately 70 cents per gallon, supply limitations given the great distance from domestic sources, requirements for fuel blend designs to combat air pollution, and other strict environmental regulations (Baker; Isidore). Like any other product market the price of gas operates on the fundamental economic principle of supply and demand. Factors of supply and demand include future oil contracts in trade at commodity exchanges, political turmoil in other nations with major oil production factories, unexpected power outages in domestic refineries and pipelines, and inclement weather (Energy Information Administration). As the average price of gas per gallon has plummeted from $3.595 to $2.881 in the state within the time span of a year, bringing temporary financial relief to thousands at the pump, concerns have arisen as to what the near future may bring for transportation expenses (Laskoski & DeHaan).

II. Current Policy

Assembly Bill 32 was passed in 2006 as a legal requirement for California to reduce its current greenhouse gas emissions to 1990 levels by 2020, which amounts to at least a 15% additional reduction below existing regulations (California Air Resources Board). The state cap-and-trade program includes carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, nitrogen trifluoride and will later incorporate gasoline and diesel fuels effective January 1 (California Air Resources Board). It is projected to produce a ripple effect in the gas industry, meaning that drivers will be expected to pay an additional 13 to 76 cents per gallon at the pump with possible increases in the future (Nolan & Khan; Taylor). Given consideration of the 1.35 million low-income working households in the state, where transportation costs comprise up to 40 percent of their budget and financial constraints are a barrier to the purchase of up-to-date fuel-efficient vehicles, it is clear that the implications are profound (Roberts, Povich & Mather; Boston Consulting Group). As costly as the burden may be, the expansion of California’s cap-and-trade program to gasoline and diesel fuels is a necessary step in the promotion of eco-friendly transportation.

III. Supporting Reasons

Dependency on gasoline and diesel fuels poses a hazard to public health by the use of drilling techniques and associated processes. Research on the long-term effects on public health in correlation with oil and gas drilling activity remains scant, but a body of evidence has begun to emerge in support of the argument that such operations can have a serious impact on nearby communities (McKenzie, Witter, Newman & Adgate). The latest available analysis of oil and gas development sites in California show that 5.4 million persons reside within one mile of at least one of over 84,000 existing oil and gas wells (Srebotnjak & Rotkin-Ellman). Hydraulic fracturing, a recently-developed drilling technique, uses over 750 different chemicals of which 29 have been listed as known dangers to public health (Committee on Energy & Commerce; Kelly & Scott). On-site workers and residents have reported a wide array of health issues that are suspected to have an association with nearby oil and gas development activity areas including asthma, headaches, nausea, sleeplessness, respiratory illnesses, cardiovascular diseases, autoimmune disorders, liver failure and even cancer (Payne & Biesel). Residence areas in close proximity to oil and gas development areas are left vulnerable to the degree of understanding and compliance the corporations have in the ethical obligation to prevent and minimize environmental toxins, which is known to cause contamination of drinking water, air and land pollution, and soil erosion (Srebotnjak & Rotkin-Ellman).

Leading scientists and policymakers argue that climate change is a growing issue that requires immediate action to dodge the worst of circumstances. It is known that a strong association exists between climate change and human factors (Western Climate Initiative). Californian drivers consume approximately 17 billion gallons of gasoline and 6 billion gallons of diesel per year with a price tag calculated at the whopping value of $53 billion in 2012 (Environmental Defense Fund). Transportation fuels alone, including those used for hydraulic fracturing, accounts for the largest proportion of greenhouse gas emissions in the state, which has a direct influence on the increase of Earth’s atmospheric heat (Thalen et al.; Kadir, Mazur, Milanes, & Randles). The impact of climate change on California has been well-documented, including its current three-year drought (Sullivan). Spring snowmelt in the region stretching from the Sierra Nevada to the Sacramento River has been in decline for the past century (Luers, Cayan, Franco, Hanemann & Croes). The rise of sea levels at a rate of eight inches in San Francisco within the same time span poses a flooding threat for low-lying areas, and irregular ocean conditions have contributed to an increased mortality rate of sea lion pups (Kadir, Mazur, Milanes & Randles). Given proper acknowledgment of the consequences of climate change and identification of effective solutions, California is in a position where its action can drive international progress on global warming.

With the increasing need for environmental conservation, it is also clear that the additional tax on gasoline and diesel fuels is an attempt to further encourage residents to use other modes of transportation. Current practical options for the middle- or low-income household family include public bus transportation and electric bicycles. Design developments are ongoing for gasoline-electric hybrid engine use in urban bus fleets, in compliance with the California Air Resources Board’s tough emission standards (Transportation Research Board). The Sacramento Regional Transit sells monthly passes and stickers at a reasonable rate, with the most expensive being just $1,200 per person per year. Given the California Department of Transportation’s recent regulations in promotion of bicyclist- and pedestrian- friendly roads, the cities of San Francisco, Davis, Los Angeles and Long Beach all have implemented cycle tracks for bicyclist transportation with successful results (Phillips; the East Bay Regional Park District). It is possible for other urban cities, including Sacramento, to follow. The Electric Bike Shop, Practical Cycle Transportation, and Shocking Rides are just some of the local businesses selling electric bicycles and scooters at affordable prices for as low as $500 and $300, respectively (Darnell). A switch to either alterative option stated above provides a clear economic benefit as funds originally meant for vehicle registration, smog tests, insurance, maintenance and fuels can be allocated to other needs. Marked improvements in physical and mental health, obesity rate reductions, decreases in the risk for cardiovascular-related diseases, and noise reductions have also been cited as additional benefits in the use of alternative eco-friendly transportation (Lindstrom; Wen & Rissel; Nelson & Beam).

Tax revenue can be allocated for renovations and expansions of roads, highways and bridges to better meet diverse transportation needs in the face of budget shortfalls. California ranks sixth in the rankings of states with over 30 percent of the system having poor or mediocre roads, second for states with the worst interstate highways, and second for states with the most road miles (American Road & Transportation Builders Association). A prominent example is the 2007 collapse of the connecting ramp from Interstate 80-East to Interstate 540-East, near the east end of the San Francisco-Oakland Bay Bridge in Oakland (Yang). Caltrans has acknowledged its past mistakes in the endorsement of archaic vehicle-centric transportation designs, which has drew much criticism (McLeod & Flusch; Buehler et al.; McLeod). An analysis of California's budget proposal for fiscal years 2010 through 2015 for the Statewide Transportation Improvement Program shows that only 4 percent of the proposed budget had been reserved for bicyclist- and pedestrian- related use, with less than 1 percent devoted to roadwork projects with implemented bicyclist and pedestrian components (Tri-State Transportation Campaign). A measly $937.5 million were allocated to bicyclist transportation projects, which pales in comparison to $154 billion for all other remaining projects (McLeod). If anything, it is in stark contrast to the fact that the state’s bicyclist population has ballooned by 89.5 percent within the time span of just twelve years, with Sacramento being in the top 25 cities across the nation for the most bicyclists (McLeod & Flusche; McKenzie). Implementation and enforcement of the cap-and-trade provision for transportation fuels in Assembly Bill 32 would contribute to the funds necessary for the Department of Transportation to address unique transportation needs.

VII. Counterarguments

As welcomed as the attempts to uphold environmental conservation may be, opponents argue that the existing policy does not seem to consider how time-consuming and expensive it is to create high-efficiency transportation alternatives at reasonable prices. Solar-powered vehicles would be one example. First established in 1990, the University of Michigan Solar Car Team is recognized as the most successful student-run organization with a specialty in designing and building solar-electric vehicles across North America, and yet it takes the team two full years to build another solar-electric vehicle immediately following the completion of the previous vehicle. As appealing as it may seem given the decreasing cost of solar energy, the solar-powered vehicle is not a practical solution. Not only does the solar array alone cost more than most existing compact cars out there, the roofs of commercially-available vehicles do not have sufficient room for current solar panels to make a difference in overall energy consumption (Team Prisum). Of course, developments are still ongoing for electric cars that can be charged with renewable energy sources including wind, solar, water, and geothermal. Charging stations for electric vehicles have begun to reach an increasing degree of availability in California, but it is not to the point of widespread use quite yet. The purchase of an electric vehicle is rooted in the assumption that the family is able to afford the choice of installing charging stations in the home for convenience purposes, of which low- and middle- income households may not be able to do.

Another counterargument is that the additional gas tax will have little to no impact on the amount of greenhouse gas emissions from transportation. Right now as is California has the highest gas prices and the second highest gas taxes across the nation, and yet it does not change the fact that most individuals drive vehicles not by conscious choice but out of pure necessity (Drajpuch). The automobile is what has made it possible for parents to drop off their children at soccer practice, students to commute to night classes after work, grandparents to make supermarket runs, and job seekers to show up to fairs and interviews. The lack of convenient transportation has a powerful effect on the individual’s level of independence and social mobility, and it is why having a vehicle is as necessary as putting food on the table. Why make it any more difficult than it has to be when it comes to affording transportation expenses? If the end goal is for the public mass to shift over to eco-friendly means, it may be far more effective to advertise and reward additional financial incentives for a household in the purchase of an electric vehicle than to punish the household for what is not an optional lifestyle choice.

It is also argued that the timing of the additional gas tax is ill-advised as small businesses and households are just beginning to recover from the Great Recession, with economists and corporation owners insisting that it would most likely do the local and state economy more harm than good. Negative economic implications have been projected, including a net loss of at least 18,050 jobs and a price tag somewhere between $3 billion and $10.8 billion, with most of the expenses falling on the consumer’s end (California Drivers Alliance; Encina Advisors). Senator Jean Fuller states that the increase of transportation expenses may ignite a possible increase in food prices at the supermarket, as most products are imported by truck from other locations, which may be difficult for low- and middle- class persons and families who are dependent on food stamps or other welfare programs. The combination of increased gas prices and the drought may make it especially difficult for farmers in the central valley to stay in business (Fuller). Jim Relles, a business owner who is dependent on vehicles for order delivery, illustrates the tough dilemma he will face if the tax still is in effect for next month: should he raise his prices and risk losing customers or should he keep the prices the same and hope he can afford payroll each month for his employees? And Relles is not alone. Business profits are essential to economic stimulation and competitiveness in the state, and this tax would be a definite setback.

Opponents point out that Governor Jerry Brown and the California Assembly plan to use direct revenues from the gas tax hike, which is calculated at about $2 billion to $3 billion per year, for several projects that are not remotely related to drivers’ immediate needs (Relles). A good third of the revenues have been scheduled for the proposed bullet train from Los Angeles to San Francisco at speeds of 200 miles per hour, budgeted at a total of $68 million (ASME). The rest will be spent on affordable housing projects and “sustainable” community areas near key transportation passageways, endeavors in the promotion of clean water and energy, and public transit operations (Relles; Lifsher). Questions have arisen as to why portions of future funds have not been marked for road and/or bridge projects, as over a third of California’s road system is in dire need of renovation. The key concern is political accountability and transparency in the use of public revenues, as consumers are resistant against the idea of paying extra at the pump if their representatives do not seem to understand what exactly their needs are.

VIII. Policy Proposal

Given consideration of both perspectives on the citizen’s dilemma between affordability for transportation fuels and the ethical obligation in protecting the environment, what is to follow is rather a compromise. It is proposed that the current policy include a cap limitation on the taxes, as not to exacerbate the financial burden for low- and middle- income families, and to ear-mark the revenues from the said taxes for spending on high-efficiency, practical transportation solutions that the population can use long-term.

IX. Closing Statements

It has been confirmed that with the expansion of California’s cap-and-trade program to gasoline and diesel fuels to curb greenhouse gas emissions to take effect next month under the provisions of Assembly Bill 32 originally passed in 2006, there will be a hike in the gas prices between 13 and 76 cents per gallon. As the state already ranks the highest in the United States for gas prices, a debate continues on the extent of justification for the short-term and long-term economic implications, including the direct burden on small businesses and low- and middle- income families. A lasting dependency on the use of oil and gas poses a serious threat to public health and contributes to climate change, which has been well-documented in existing literature across scientific, non-profit, corporate and governmental perspectives. As such there is an ethical obligation to make a transition to eco-friendly transportation alternatives and existing technological advances has begun to make that a practical reality. For accountability purposes a cap limitation on the gas tax hikes is proposed with earmarks on the tax revenues for sustainable transportation projects, such as bicyclist- and pedestrian- designed facilities.

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