

Comments on the CEC Staff Report

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The Economics of ATC

- The Staff Report correctly identifies the key economic issues related to ATC, as summarized in Tables 7 & 8:
 1. The average temperature of fuel dispensed in California is higher than 60 degrees. A shift to ATC will reduce the number of gallons sold but will not change the amount consumers spend on gasoline (**column labeled “Retained Retail Motorist Benefits” is equal to zero**)
 2. The dispensed temperature varies across locations, stations and time. A switch to ATC will change the information available to consumers – the commission correctly concludes that the effect of this change is very small (**column labeled “Increased Transparency Benefits” amounts to about 17/1000 of a cent per gallon**)
 3. The added costs of the ATC equipment will be passed on to consumers in the form of higher prices for fuel and possibly higher prices for other products (**columns labeled “Initial and recurring industry costs”**)
 4. The costs of ATC outweigh the benefits of ATC (**column labeled “Net Cost or Benefit” is negative**)
- These conclusions are basically correct

The Economic Impact of ATC

- The implementation of ATC in California would have three primary economic effects
 - 1) There would be a change in the average size of a “gallon”
 - 2) There would be a change in the information available to consumers
 - 3) There would be additional costs associated with installing and maintaining the equipment
- Each of these elements requires a somewhat different economic analysis
- The staff report deals directly with each of these in in their cost benefit analysis in tables 7 & 8

My Primary Concerns Regarding #1

- The report's discussion of an initial shift in revenue and subsequent revenue recapture caused by the change in the average volume of a gallon is highly susceptible to misinterpretation
- In fact, this analysis has already been misinterpreted
- The discussions of a shift in revenue and of revenue recapture are not correct as a matter of economics
- Market prices for fuel are determined by supply and demand, both of which are unaffected by ATC

Average Temperature and the Impact of ATC

- When fuel is dispensed at temperatures above 60 degrees, switching to ATC has two effects
 - ATC increases the size of each “gallon” so consumers require fewer of the new “gallons” to fill their tank
 - The retailer’s cost for the new larger gallon will rise due to the increased volume of fuel per gallon
- However it is critical to realize that
 - ATC does not change the temperature or total volume of the gas received
 - The retailer’s cost of a given volume of fuel (e.g. a tank full) is exactly the same with or without ATC
 - The consumer’s value of a given volume of fuel (e.g. a tank full) is also exactly the same with or without ATC

Average Temp. and the Impact of ATC (cont.)

- Since a consumer's value of a given physical volume of fuel is unchanged, and the retailer's cost of that same volume is also unchanged, the market price for a given volume of fuel (e.g. a tank full) will be unaffected by ATC. This implies that:
 - The amount paid by consumers will be the same
 - The revenues received by retailers will be the same
 - The volume of gas sold will be the same
- There is no revenue shifted from retailers to consumers through temperature adjustment. So there is no revenue to be "recaptured" and no reason for the prices of other commodities to adjust
- Consumers pay the same amount for gas and retailers earn the same profits
- Supply and demand remain in balance
- The direct revenue effect will be zero

An Example

- Consider a station dispensing fuel at 75 degrees at a price of \$2.00 per gross gallon
- The consumer purchases enough gas to fill his tank (20 gallons) for a total cost of \$40.00
- With a margin of 14 cents per gallon the retailer earns a variable profit of \$2.80 on the transaction and has a fuel cost of \$37.20 for the gasoline dispensed
- Now switch to ATC
 - The consumer buys the same total volume of gas at the same total price to fill his tank
 - The consumer now buys 19.802 net gallons at \$2.02 per net gallon
 - The consumer again spends $\$40.00 = 19.802 \times \2.02
 - The cost to the retailer is still \$37.20 since the same amount of fuel is dispensed
 - This leaves the consumer and merchant in exactly the same position as before ATC – there is no reason for either to change their behavior
 - There is no revenue to recapture or increased cost to be passed through on other items

Aggregate Example

- The same result can be seen looking at sales in the aggregate
- The total amount of gasoline available for sale in California is unaffected by change in units
- The cost to retailers of that gasoline is unaffected by the change in units
- The distance consumers can drive on that gasoline is unaffected by the change in units
- Therefore, the balance between aggregate supply and demand is unaffected by the change in units