California Independent Oil Marketers Association
3831 N. Freeway Blvd. #130 • Sacramento, CA 95834
(916) 646-5999 • (916) 646-5985-fax
www.cioma.com

July 1, 2009

National Conference of Weights & Measures
Laws & Regulations Committee
1135 M Street, Suite 110
Lincoln, NE 68508

Subject: California Independent Oil Marketers Comments: Automatic Fuel Temperature Compensation Items Under Consideration; Recommendation to Prohibit

NCWM Laws & Regulation Committee Members:

The California Independent Oil Marketers Association (CIOMA) wishes to provide the following comments on the items to be considered regarding development of requirements for the use or mandate of automatic temperature compensation (ATC) technology at retail fuel outlets. ***We recommend that automatic fuel temperature compensation at retail outlets be prohibited.***

CIOMA sponsored the California legislation (AB 868 [Davis, 2007]) which required the California Energy Commission to prepare the first comprehensive cost-benefit analysis ever performed on retail ATC deployment in the United States. We sponsored this legislation as we were continually fighting exaggerated and unfounded claims on how ATC might affect the consuming public. We now have a completed study that provides an independent review and analysis of issues, costs and benefits surrounding deployment of ATC-equipped (or adjusted) fuel pumps. The conclusions of the report provide a solid and irrefutable basis for the prohibition of ATC at retail. It is important to note that the report conclusions were derived in a "warm" state where the average fuel temperature is over 70 degrees (F) – 10+ degrees warmer than the standard 60 degrees (F) reference measuring point.

Our initial assumptions regarding ATC have been ratified by the independent conclusions in the report:

- ATC is expensive to install and maintain;
- consumers will see no benefit and only costs from its installation; and,
- consumers will merely wind up paying *more* for the same units of purchase.

Some of the important conclusions made in the report include:

Cost to Society

- "…it is unlikely that there are any plausible circumstances whereby some consumers could realize a small net benefit of ATC at retail in California."[1]
- "Net costs to society amount to approximately $245 million…"[2]

[1] CEC Final Fuel Delivery Temperature Study, pg. 107, Findings section
[2] CEC Final Fuel Delivery Temperature Study, pg. 73 ATC Retail Cost-Benefit Analysis section

Retrofit Costs

- "Statewide costs for ATC retrofit kits are estimated by staff to amount to approximately $85 million or $8,763 per retail station."[3]
- "Energy Commission staff estimated that the time required to inspect and certify retail fuel dispensers will increase between 10 and 20 percent if ATC is mandated for use at retail stations in California."[4]
- Total statewide costs for the new equipment (specialized thermometers) they will need to verify the accuracy of ATC dispensers is estimated to range between $77,000 and $140,000.[5]

Adjusting fuel price to meet new distribution requirement

- "The conclusion, therefore, is that retail station owners will in fact raise their fuel prices to compensate for selling fewer units, all other things being equal."[6]
- "...the retail station owners are expected to adjust the price of the new units to a slightly higher level to try and maintain similar levels of profitability in a post ATC scenario."[7]

Statewide/regional reference temperature change

- "Based on the report analysis, the Committee concludes that establishing a new statewide reference temperature, or different regional reference temperatures for the state, would not successfully address temperature compensation at the retail level and therefore does not recommend this approach."[8]

Small services stations and fuel supply

- "If ATC was to be mandated at retail stations in California, it is possible that the expense to comply with the regulation could be onerous for some station owners. Some of these station owners may be unable to obtain adequate financing and could possibly close their business."[9]
- "The closure of a retail station that was either the sole or one of only two sources of retail fuel for a community could create a local fuel supply availability problem.[10]

In a nutshell, here is why we believe ATC at retail is inappropriate:

- ATC will cost consumers. The report concludes costs are greater than benefits. The report states that retailers will merely adjust their sales price to compensate for changes made to dispensed volume – there will be no "free fuel" dispensed. The report states that the costs of installing and maintaining the equipment will be passed on to consumers. "*It is unlikely that there any plausible circumstances...*" where consumers will benefit from ATC.
- ATC changes the method of dispensing along the distribution chain. It is important to understand that there is consistency in fuel distribution from the rack to the customer at the current time. Gross gallons are distributed at the rack, gross gallons are distributed though the wholesale chain, and gross gallons are distributed at retail. What is changed (only at the rack) is the *price*. Deployment of ATC at retail will change dispensing from

[3] CEC Final Fuel Delivery Temperature Study, pg. 104, Findings section
[4] Ibid
[5] CEC Final Fuel Delivery Temperature Study, pg. 104, Findings section
[6] CEC Final Fuel Delivery Temperature Study, pg. 70, Quantification of Potential Consumer Benefits section
[7] CEC Final Fuel Delivery Temperature Study, pg. 71, Quantification of Potential Consumer Benefits section
[8] CEC Final Fuel Delivery Temperature Study, pg. 3, Executive Summary section
[9] CEC Final Fuel Delivery Temperature Study, pg. 105, Findings section
[10] Ibid

gross gallons to net physical gallons at the pump. This brings *inconsistency* into the distribution chain, *not* greater consistency.

- ATC creates greater consumer mystery – At the time the customer receives their final receipt they have no idea how much more, or less, fuel they have received. They merely get a receipt stamped with "Temperature Corrected Gallon". We believe that if Canadian customers truly understood they were receiving less than a full gallon on a consistent basis, the issue of temperature compensation would become more hotly argued in that nation.
- No free fuel – There has been an underlying, incorrect assumption that the fuel customer will receive, in warm states, more cubic inches of fuel for the same price as they are currently paying. The CEC report concludes that retail prices will be adjusted to compensate for changes in dispensed volume created by the ATC equipment. The analogy is like switching from gallons to liters. The same type of adjustment will be used to adjust price for ATC-dispensed fuel. Since fuel is purchased in gross gallons (regardless of how it is priced), the retailer must sale-price product in gross gallons to achieve a like-quantified return on investment. Retailers are *not* going to give away fuel.
- ATC does not give customers an accurate energy-density-adjusted gallon. ATC only corrects for one variable in the energy density of fuel at the retail nozzle – temperature. The CEC report notes that other factors such as refinery fuel composition, regulatory seasonal fuel blend adjustments, and inclusion of biofuels can have much more dramatic impact on fuel energy density than temperature. ATC falsely leads customers to believe they are getting an energy-adjusted gallon. They are not.

For all of these reasons we believe the argument and controversy over automatic fuel temperature compensation needs to be put to bed. ATC needs to be prohibited and the Conference needs to take an affirmative stand that it is not an appropriate sales technology at the retail level. ***We ask you to take this action.***

CIOMA represents independent marketers who purchase gasoline and other petroleum products from refiners and sell the products to independent gasoline retailers, businesses, and government agencies, as well as representing branded "jobbers" who supply branded retail outlets, especially in rural areas. Our members are primarily small, family owned businesses who encounter unique difficulties in meeting California's complex and increasingly expensive environmental requirements. We represent approximately 400 members, about half of whom are actively engaged in the marketing and distribution of petroleum products and fuels.

If you need additional information or insight into our conclusions please do not hesitate to contact me at your earliest convenience.

CIOMA Letter to NCWM: Prohibit ATC
July 1, 1009

Sincerely,

Jay McKeeman, Vice President, Government Relations & Communications

cc: PUMP Coalition members
CIOMA Board of Directors

Commonwealth of Massachusetts
Office of Consumer Affairs and Business Regulation
DIVISION OF STANDARDS
One Ashburton Place, Room 1115
Boston, Massachusetts 02108
TELEPHONE: (617)727-3480 FACSIMILE: (617)727-5705

DEVAL L. PATRICK
GOVERNOR

TIMOTHY P. MURRAY
LIEUTENANT GOVERNOR

GREGORY BIALECKI
SECRETARY OF HOUSING AND ECONOMIC DEVELOPEMENT

BARBARA ANTHONY
UNDERSECRETARY OF CONSUMER AFFAIRS AND BUSINESS REGULATION

CHARLES H. CARROLL
DEPUTY DIRECTOR

July 6, 2009

Joe Gomez, Chairman
NCWM Laws and Regulation Committee
New Mexico Department of Agriculture
MSC 3170, P. O. Box 30005
Las Cruces, NM 88003-8005

Dear Chairman Gomez:

The ATC issue is not a new issue to NCWM it has been around a long time. When last visited by the conference it was rejected as there was no compelling argument or consensus to adopt ATC as a required method of sale at the retail level at that time.

The current discussions and multiple hearings held on the issue raised more questions than answers. In addition, those most affected by the proposal if adopted are opposed to it and consumer groups are also against it by more than a two to one margin.

The statement in the L & R Committee report that the NCWM was now in a position to make an informed decision on this issue couldn't be more further from the facts. The facts are two regional associations representing half the country are opposed to adopting ATC as a method of sale. This fact does not spell out consensus it spells out dissention. Before we move this issue forward we must have a very definitive consensus to adopt. In reality the arguments presented thus far have not convinced me that the current method of sale is inequitable to either the buyer or seller.

In any geographic locale the temperature variations are very small from one retail location to another within that location. Competition for market shares is based on pricing rather than a large or small gallon. Consumers purchase motor fuel in most cases based on price. The competition for these consumers is fierce and pricing is the major tool used to attract customers. If retailers all sell the same gallon then we have a level playing field which is the bottom line in enforcing weights and measures laws. ATC if mandated will do nothing but increase costs for businesses and consumers. NEWMA has discussed this issue in depth and we took a stand not to support adoption of this requirement. Remember, retail motor fuel individual sale volumes are small thus any variation due to temperature is also small.

We in the Northeast feel that the current system of measurement is accurate and equitable and urge your committee to withdraw the two proposals currently in your committee.

Respectfully,

Charles H. Carroll
Deputy Director, Commonwealth of MA

APMA Arizona Petroleum Marketers Association

July 6, 2009

Mr. Joe Gomez
Chairman
Laws & Regulation Committee
NCWM 2009 Annual Meeting
RE: Automatic Temperature Correction Voting Items

Dear Mr. Gomez and L&R Attendees:

On behalf of the Arizona Petroleum Marketers Association, I would like to thank you and your colleagues for your time and efforts in addressing the issue of automatic temperature correction (ATC) and whether the equipment should be permitted or mandated for use in the retail marketplace.

Given the current economic climate, retailers across the country are justly concerned. The potential implementation of ATC devices at retail should not be adopted hastily. To date, it has not been clear at NCWM meetings or at regional W&M meetings how the petroleum marketing landscape will be improved for consumers with the adoption of ATC, nor has it been vetted out among NCWM officials exactly how an ATC marketplace would provide consumers with greater clarity regarding the energy content of their fuel purchase. Various gasoline formulas have varying BTU's and ATC devices do not balance out the BTU difference for consumers.

Having attended the NCWM's annual meetings since June 2007, APMA urges NCWM officials to vote NO on L&R voting items 232-1 or 232-2 for the following reasons:

232-1 ATC Method of Sale Proposal Developed by the NCWM ATCSC
This first voting item on ATC is a multi-prong proposal which would permit ATC for both wholesale and retail devices as of January 1, 2010 and then mandate ATC for both wholesale and retail devices as of January 1, 2020. The permissive and mandatory provisions have a caveat so that they are not effective where they conflict with other statutes or regulations.

NCWM in the past asked industry to weigh in on the various scenarios in which retail ATC would be implemented and whether there should be a permissive phase and/or ultimately a mandatory phase. NCWM officials need to recognize that a permissive retail ATC scenario will create an unlevel playing field in the petroleum marketplace. In fact the ATC Special Committee actually recommended that any permissive stage be as short as possible.

By allowing the installation of ATC to be permissive, NCWM is essentially allowing large well-financed retailers to use the ATC regulation as a potential way to gain an unfair market advantage over smaller retailers. When coupled with the recent additional tank requirements under the federal Energy Act of 2005, many small retailers may decide that they can't afford to make these costly changes to their operation and close shop. Ultimately, this harms the consumer by decreasing competition in the

Permissive ATC also creates major confusion for the consumer because they can no longer compare station's pricing based on the same gallon being sold station to station. While the temperature in Arizona may very well be over the 60 degree standard---the temperature is constant corner to corner—consumers can easily compare price per gallon from the street—even if it is a gallon at 80 degrees. However, under a permissive retail ATC scenario, a consumer will be hard-pressed to compare stations selling ATC fuel versus retail sites selling traditional gallons.

Additionally, if some states decide not to implement retail ATC while other states do implement it---interstate commerce and taxes could be significantly impacted as well.

Overall, voting item 232-1 would not result in a better petroleum marketplace for consumers but instead will result in almost ten years of uncertainty and confusion for consumers regarding the legal method of sale for petroleum products.

Another concern with voting item 232-1 is section 2.32.2.2 (c) 3, which states that "If a fuel is sold temperature corrected from a measuring device at a business or fleet location, all sales of the same fuel from that business or fleet location shall be sold temperature corrected over at least a consecutive 12-month period." Because NCWM changed its definitions for wholesale and retail devices in 2004, many transactions which industry would consider wholesale are considered transactions with retail devices and would now fall under this provision.

So, it is possible for a petroleum jobber who delivers to agricultural customers and/or business fleets to be in a situation where one customer may request their deliveries to be ATC and another customer does not want ATC. This jobber would no longer be able to deliver fuel to both customers under the proposed provision because the tanker to deliver that fuel would have to have a vehicle tank meter with ATC and be dedicated to delivering ATC gallons only for twelve months to accommodate the customer requesting ATC, thereby no longer able to deliver non-ATC fuel to his other customer.

Voting item 232-1 does not contain any flexibility in it to address the hardship or difficulty in implementing the new method of sale for specific customers. While APMA recognizes that the purpose of section 2.32.2.2 (c) 3 is to prevent a "traditional" retailer from selling through the compensated or uncompensated dispenser only when it benefits the seller, the language in the proposal snags what would be considered wholesale transactions by industry due to the definition of retail devices.

232-2 Original Recommendation for a Method of Sale Proposal for ATC Developed by the 2007 Committee

The second ATC voting item in L&R allows for the use of ATC where it is not in conflict with other statutes or regulations. It essentially codifies permissive ATC for states wanting to implement ATC and for those 18 states which automatically adopt the regulation by reference or citation.

Voting item 232-2 also contains section 2.32.4.2 under Other Provisions which states "At a business location which offers products for sale on the basis of a temperature compensated volume, all measuring devices shall dispense on the basis of temperature-compensated volume…"
APMA would urge voting members of the NCWM to reject voting item 232-2 for the same reasons that 232-1 should equally be rejected.

Creating the infrastructure to allow for two legal methods of sale for petroleum products sanctions a confusing and chaotic marketplace for consumers where they can no longer compare prices between competing stations at an intersection. NCWM would essentially be injecting inconsistency into the market.

Voting item 232-2 will also inadvertently harm those engaged in the wholesale jobber business and force them to make a decision to serve only customers wanting ATC or those not wanting ATC products. This voting provision essentially requires them to have all of their vehicle tank meters to dispense ATC if they choose to serve a customer who wants product delivered ATC.

POTENTIAL FUTURE SOLUTIONS

In the interest of cooperation and better understanding on ATC issues at retail; APMA would like to see NCWM prohibit the use of ATC for retail devices. There still does not appear to be consensus that ATC benefits consumers or creates a better marketplace for consumers. If NCWM is not of a consensus to mandate a new legal method of sale for petroleum products it does not seem just that NCWM would allow for multiple methods of sale to exist for a product. Prohibiting ATC at retail, even if it is for a finite time, would allow for a much more meaningful and merit driven debate on whether ATC should become the new legal method of sale for petroleum products.

At the same time, it would be beneficial to have L&R take a closer look at the definitions of retail and wholesale devices and also consider whether it might make sense to develop definitions for actual transactions—wholesale versus retail to account for various end user tanks. It also seems appropriate for L&R and/or the regional W&M associations to consider language which would provide jobbers with some flexibility recognizing the diversity of customers served.

APMA truly appreciates the opportunity to share our concerns with NCWM officials. We intend to remain active and engaged on the issue of ATC for retail devices and hope that the ultimate decision reached by any state legislature or regulatory agency will be one which balances science and the best interest of the consumer.

State of New York
Department of Agriculture and Markets
10B Airline Drive
Albany, New York 12235

Bureau of Weights and Measures
518-457-3146
FAX: 518-457-5693

July 6, 2009

Joe Gomez, Chairman
NCWM Laws and Regulations Committee
New Mexico Department of Agriculture
MSC 3170, PO Box 30005
Las Cruces NM 88003-8005

Dear Chairman Gomez,

I have been a student of the ATC issue for many years. My connection to the issue began with my first trip to an NCWM meeting in Portland, Oregon in 1979. The ATC issue was already an old issue at that time. I have also conducted my own research and reviewed multiple papers on the subject, both pro and con. I served on the NCWM ATC Steering Committee and I was contributor to the California Energy Commission study. Based on long and careful study of the issue, I must urge you to withdraw your proposals that either permit or mandate the use of ATC at retail. In addition I urge you to consider offering instead a proposal that recognizes the current method of sale on the gross basis but puts it formally in regulation with a ban on artificial heating.

I am also submitting a paper that exposes the weaknesses in the arguments for increased fairness with ATC. For many years we have heard claims of great economic losses and of unfair competition. I believe my presentation and written materials combined with works of many other more worthy experts has dispelled every one of those claims. The paper attached tries to show that the fairness claims are presently unfounded since even the supporters of the argument must admit that there is no empirical data to show that variations between stations are significant. In addition, there is no cost based analysis of any kind that shows ATC pays. Thus your two proposals are promoting a solution where there is no problem to solve.

Weights and Measures professionals have always recognized that allowing reasonable variation is necessary to keep costs of measurement low. In my paper I reference both Handbook 44 and 133 and show that they both limit variation to prevent serious harm to either buyer or seller. We have no evidence to support any claim that the variations in the present system are unreasonable or cause any serious harm. The recent draft report from the Alaska Fuel Metering Project calls this a lottery that participants (both buyers and sellers) have a 50% chance of winning with jackpots measured in pennies. Thus I have always been confused by the eagerness of this Committee to move ATC forward without valid supporting facts.

Two years ago at the Annual Meeting in Park City New York abstained from voting on the ATC proposal. I told the Committee in open hearings that we did not have sufficient information to make a valid decision on public policy at that time. I urged the Committee to craft its report in the form of a Regulatory Impact Statement (RIS) exactly to show that we did not have that information. Now we are again faced with voting items that the Committee hasn't justified.

The CEC report left us with a powerful visual image for California of an equal arm scale loaded on the cost side with $210 to $410 million and loaded on the benefits side with a meager $3.8 million. What were the critical issues and indicators that convinced the Committee that fairness issues would trip that balance to the other side? They are not in your report. Instead we are directed to view the reports of past years and they too lack any conclusive justification for either of the proposals now up for vote. If you had the justification, I would have expected to see at least a comprehensive summary of what tripped the scales for you in the text of this year's report. Those needed to be very powerful arguments because of the overwhelming imbalance. I and about 30 other state directors need that summary to help us craft the RIS text for our states.

I am very concerned about the lack of consensus and what appears to be a lack of interest in consensus by the Committee. I quote from page L&R -5 of your report:

> *This item has been on the agenda for several years and deserves reconsideration by the full membership of the NCWM. The Committee members reviewed available information and testimony and decided that the NCWM was now in a position to make an informed decision on this issue. This is also a decision on which the entire membership must have an opportunity to vote.*

The consensus building process that is the hallmark of the NCWM is not visible in this paragraph. Instead I see a straw poll decision making process. Let's float a few ideas and see if anyone takes a fancy to one of them? Perhaps that meaning is not what you intended to say, but it most definitely leaps off the page when you read it. <u>We should not be voting to see if we have a consensus, we should vote only when we are confident we have actually reached that consensus!</u>

Does this Committee somehow claim to have a consensus when the four regional associations are split two for and two against ATC, the regulated industry is 100% opposed to ATC, and even consumer interest groups are running 70/30 against ATC? By the basic rules of engagement, the supporters of ATC have to make a case that change is cost beneficial. I submit they have failed to make that case and this has been exposed by the works of the economics experts. The arguments for fairness are equally as hollow as the hot fuel rip-off arguments and as I have shown they only make sense when you constrain retailers to make business decisions that don't make sense.

If you are using straw polls to create NCWM standards, why only offer us net gallon options? I am confused as to why a gross gallon proposal that adopts the status quo with a ban on artificial heating has never appeared in your previous reports. The ban on artificial heating could eliminate the only real problem ever identified in our discussions, namely a few above ground storage tanks that were painted black. Why is it that we could not even discuss a gross gallon proposal? Why is the method of sale we are using today, and have used for 80 years, not worth codifying in regulation to eliminate confusion?

I have served on the L&R Committee and I know that the issues are not easy to resolve. Gaining consensus on controversial issues takes hard work on everyone's part. I urge the Committee not to make rash decisions without a consensus and continue to work toward that consensus. Please do not force a vote on the two proposals in your report. Unlike two years ago, today we have the information necessary to vote intelligently against any proposal that either permits or mandates ATC at retail. I would much rather vote for something that really represents a consensus.

Respectfully submitted,

Ross Andersen, Director, New York State
Michael Sikula, Assistant Director

Is the ATC "Fairness" argument just as hollow as the hot fuel allegations?
Ross Andersen, New York State
July 6, 2009

There are numerous claims that temperature compensated measurements are more comprehensive and thus more fair than the present gross gallon measurements for fuel transactions. These claims are not new and can be traced to debates at the NCWM from the early 1970's. Henry Oppermann's latest paper on the subject [1] is essentially a restatement of those assertions with the addition of some new analysis of temperature data gathered over the last few years. He strains to force the data to fit his arguments by pushing the wrong point of view, i.e. a focus on individual transactions rather than on reasonable averaging. In the process he attempts to invalidate long standing principles in Weights and Measures that have always permitted reasonable variation within a framework of tolerance.

Mr. Oppermann is correct to use NIST Handbook 133 [2] as a good focal point. That standard recognizes that variations within reasonable limits are acceptable and it further recognizes that averaging is an acceptable business practice for the packer to make business decisions. Mr. Oppermann is essentially arguing that the Handbook 133 approach is wrong, i.e. that the retailer should be using technology to ensure each package contains the exact net weight regardless of cost, and that averaging variations is not a solid business practice for either the buyer or seller.

In Section III of his paper Mr. Oppermann states, "Product temperatures can vary greatly at retail. Consequently, temperature differences are significant at retail." We are expected to take that statement at face value and without question. Taking the view of an impartial arbitrator in this case, I am required to question it and I believe the burden of proof lies with those who would seek change. We have heard the claim that temperatures vary greatly many times over the year, but never have we heard what objective standard is being used to judge whether that assessment is correct. Is the variation excessive or is it actually within reasonable limits, i.e. within tolerance? Nor have we seen any explanation of how the significance of the impact of the variation on retail trade practices was assessed.

I will try to show that those advocating for ATC have essentially failed to see the forest for the trees. They zoom in, but you can't assess the viability of the forest from that point of view. This is critical since ATC advocates have never made a positive connection between fuel temperature variation and profit or loss for either buyer or seller. While many have made claims of that connection, I do not believe that anyone has yet convincingly made arguments to support it. Specifically, they cannot project that any change at the individual transaction level with ATC will impact the pricing practices of the seller or the purchasing practices of the buyer. If this connection cannot be made convincingly, then any cost to upgrade will accrue to the buyer but not result in delivery of any additional fuel or increase in value to the transaction.

To continue the HB133 analogy, compare transactions involving other commodities. A one pound package of hot dogs or chicken can vary in value (net weight) up to 6.25%. For other non-meat products the permitted variation is 4.4%. Energy content of conventional gasoline without ethanol can easily vary 5% due to fuel composition. With added ethanol the variation is even larger. In the case of a retail fuel sale the variation due to temperature is about 1%. On what basis do you say this is too large?

To look at it in another way, let's consider the gas station that buys 100 loads of fuel of 10,000 gallons each and averages the price over each tanker. Is this not equivalent to a packer putting up 100 production lots of 10,000 packages each? The packer is permitted to average over the production lot just as the retailer averages over the sale of each tanker load. Provided no one is seriously harmed by the individual transaction variations and the average is very close to the true quantity, I suggest you cannot find that anything is out-of-tolerance. I further submit that nothing I've seen in the fairness arguments have supported that conclusion that anything is out-of-tolerance.

Do the transactions average close to zero? Yes, even Mr. Oppermann admits this in Section IV where he states, "If one looks only at the average difference between the BOL temperatures and the temperatures of the product delivered over a period of a year, the average differences are relatively small, often less than 1.5 °F." In the marketplace we find the averaging comes very close to zero, even over much shorter averaging periods, as retailers must be able to justify any significant inventory gains or losses to tax, environmental and fuel quality auditors. Most people in the retail fuel business will acknowledge that fuel sale temperatures are varying slightly, but claim that intense competition forces them to make correction for the macro impact of those variations in their everyday business decisions.

Mr. Oppermann also fails to mention that in aggregate the gains and losses in inventory at retail have traditionally been in favor of the buyer, as retailers typically sell less gross gallons than they buy. I provided a specific example for a local retailer that showed the gains and losses do average close to zero even on a weekly or monthly bases and the aggregate is close in agreement to the 1.5 F mentioned by Mr. Oppermann. I also was provided data from the Pilot Truckstops in California that confirmed similar findings. For over 120 million gallons of diesel fuel sold in 2008, the 10 Pilot truck stop locations lost a total of 114,000 gallons of inventory and I was told this is consistent year to year. This is close to 0.1% loss resulting from selling fuel about 2 F colder than they purchased it.

The weights and measures community adopts NIST Handbook 44 [3] as the regulation for assessing compliance of commercial weighing and measuring equipment. The philosophy used to set device tolerances is given in Fundamental Considerations section 2.2. Theory of Tolerances. This philosophy is entirely consistent with Handbook 133 as it is also based on keeping the average close to zero error (also see section 2.3. Theory of Adjustments). That standard declares the intent to set tolerances so as to prevent "serious harm" to either buyer or seller, yet keep the cost of the measuring equipment low. Commercial equipment needs to be practical, i.e. "good enough" to meet commercial needs. Yet ATC advocates seem to disagree with this principle as with the Handbook 133 averaging concept. They believe that variation is unacceptable and advocate using the best equipment available regardless of any cost benefit relationship. Would it not seem appropriate for them to show some serious harm in the present system? Otherwise, would it not be appropriate to show some cost benefit relationship for the improvement? I submit they have completely failed in either regard.

The California Energy Commission's Report [4] suggested a method to evaluate "fairness" through experiments to assess the significance of between station temperature variations and consumer willingness to pay the ATC costs. While we acknowledge variation exists due to temperature, no one has yet split out the within station and between station variations that comprise the total variation. The temperature data collected thus far only provides total variation. Simply stated, <u>we do not know</u> if the between station variations are significant! The CEC with assistance from Murphy & Topel [5] used a 10 F range to reach their conclusions that ATC did not pay economically. Yet the ATC supporters would have us commit to spend these enormous sums to implement ATC without valid facts.

We already have some consumer perspective and they are polling at least 70-30 against ATC. The consumer groups that support ATC made their pitch primarily on the basis of the hot fuel allegations with fairness being the icing on the cake. Now they are left with only the fairness to carry the entire battle. The ATA makes very powerful arguments that they do not see any benefit for them in ATC. This consumer group appears to dwarf the others in the membership they represent and in their fuel purchasing power.

In addition, the CEC plan seems to have left out the retailer. Can we conclude that the uncertainty due to between station variance is of no concern to retailers? What about competitive fairness? The retailer does not know any more or less than the retail customer how his fuel temperature compares to any of his competitors. Shouldn't we also include the retailer's interest in ATC as a factor as well? Perhaps the Commission left them out since retailers had already testified to the NCWM on the issue. That testimony indicated they strongly believed the fairness benefit they would accrue with ATC was clearly not worth the cost.

There are several other arguments made by supporters of ATC that strain to have merit. I'd like to identify several of them as they appear in Mr. Oppermann's paper and have been argued in the NCWM proceedings. The section references in () refer to Mr. Oppermann's 6/14/09 paper.

- Wholesale and Retail trade are equivalent since what is good for wholesale is good for retail (section II). I find this argument totally untenable. For one thing I estimate there are about 50 retail devices for every wholesale device. Thus the cost of ATC will have to be about 50 times greater per gallon at retail to compensate the same volume of fuel. I submit that you can't assume they have the same expectations nor would they make the same business decisions.
- Variations in temperature result in errors in unit prices that reach in excess of 1% (section IV). This of course demands that costs and margin are always passed through to the buyer at 1 for 1, and there is no feedback on incorrect business assumptions. Since the retailer makes price changes on a daily basis or perhaps even more often, the ATC advocates have not provided room for any possible minor adjustments within the system. I see the opposite in the works of Flynn [6] and Murphy & Topel, and the Alaska Fuel Project [7]. They understand that retail pricing is a dynamic process that is always working to find equilibrium. I hold that inventory gains and losses do factor into price setting and do correct for minor offsets. If retailers see inventory gains their target prices adjust down and if they see losses their target prices adjust up. Due to market factors the retailer may be forced to accept less than the target in some cases and may be able to get more than the target in others. The fairness arguments fail to allow for this flexibility and we see this same type of constraint on the market in the hot fuel allegations.
- Showing dollar figure losses are supposed to indicate significance (Section IV). Mr. Oppermann provides estimates of $0.30 cent losses at $2.00 per gallon on a 15 gallon purchase as proof of harm. But isn't harm relative? Against what standard shall we assess the relevance of these individual transaction variations? The ATC supporters have not even suggested a standard nor have they provided justification for their assessments. Instead we are asked to accept their opinion on significance without question. The authors of the Alaska Fuel Project describe this as a lottery in each purchase that both buyer and seller have a 50% chance of winning but the winnings add up to pennies.
- Gross gallon sales are like the sale of hamburger where the variation reaches 100% (Section V). We have heard this argument many times but note that it is really

meaningless as the variation we are discussing is really around 1%. Can the ATC supporters make the same claims when the delivered value varies only by 1%? The retailers consider the temperature variation to be reasonable or "in tolerance." ATC supporters have never made a case that the variation is excessive.

- Mr. Flynn's projection of gross price changes are not reflected in actual retail prices (Section VI). Here Mr. Oppermann compares two graphics and the reader is expected to see that the two graphs do not match in the pattern of change. However, it is important to note the differences in Y scale. Mr. Flynn's graphic has a 12 cent Y scale and the retail price graphic has a 160 cent Y scale. Had Mr. Oppermann redrawn Mr. Flynn's graphic in equal scale, the price changes would have almost been a straight line. It would not have had any visual impact since the variation due to temperature is totally dwarfed by the market fluctuations due to non-temperature related factors. It is unreasonable to suggest that you could conclude anything from those two graphics. Indeed, to suggest from that comparison alone that Mr. Flynn's projections are unsupported is preposterous. He was trying to show that the hot fuel profits cannot be seen in other independent studies of station profitability. He suggests that if the price changes he projects were not made, then stations in California would be almost $60,000 more profitable each year than their Minnesota peers.
- Mr. Flynn's Scenario # 1 of equal fairness when buying and selling in gross units is invalid since it contains variation (Section VIII). Why is reasonable averaging not permitted? Variation is part of every measurement system. Clearly the inventory gains and losses are small over any small period of time and this indicates that the small losses and gains in individual sales do average out very near zero error. I believe that retailers assume they are all competing at the same local average temperature and in aggregate, the system is in tolerance. There is also going to be some variation in net gallon purchases and sales. Does that mean we can also invalidate scenario 4, buying in net and selling in net, as well? I do not see how Mr. Oppermann summarily dismissed the argument without some justification that the system under scenario 1 was in fact out-of-tolerance.

'o see the crux of the argument, look near the bottom of page 1 of his paper [1] where Mr.)ppermann asks, "Are weights and measures officials interested in accurate measurement only n the basis of an annual average or are they interested in the accuracy of individual ansactions?" Clearly my answer is, neither of those is the right choice. To the extent ATC upporters make this argument, they are trying to restrict the reality to make a case. They are ssentially tossing basic W&M philosophies and premises out the window. I suggest that we nust find the point of view where we can examine the retailer's price changes and see what npact fuel temperature and temperature variations have on those changes. The averaging one by the retailer is going to be over a rather short period, maybe less than one day to erhaps two or three days. Either way, it is much shorter than the annual average that ATC upporters try to impose as a limitation.

Aore important, can temperature variability at the individual transaction level really drive the narket? I conclude that is also preposterous. The retailer can't be expected to think and act in nicro terms. It is totally unreasonable for the retailer to check the inventory and the money alance in the till after every single transaction with intent to adjust the advertised prices.

t the other extreme, the retailer can't set a price on May 15th with no further check on rofitability until COB the following May 14th. Clearly the retailer has to operate on a macro level nd the critical time frame lies somewhere in between the individual transaction and the annual verage. I suggest that the market forces the retailer to find the correct time frame in order to stay in business. It's also critical to keep in mind that the appropriate time frame to assess temperature variations may be different than for variations in other market factors. Thus I would ask Mr. Oppermann's question in a slightly different way. Instead of asking from the W&M official's perspective, how about asking from the perspective of a buyer or seller. What real improvement will be made with ATC, if the averaging of the temperature correction with gross sales is made at the daily or tanker load level with minor corrections made for the small inventory gains and losses? Clearly the answer for both parties is little or none. This is in concert with the findings of Flynn, Murphy & Topel, and the Alaska Fuel Project who conclude the consumer cost for the same quantum of fuel will not change with ATC.

Thus I conclude that the supporters of ATC have grossly failed to make the case for ATC. I submit the system is operating within tolerance. In particular, there is no objective standard to suggest that the minor daily temperature variations in the fuel are in any way excessive. There is also no clear connection between these temperature variations and any profit or loss to either buyer or seller. Finally, critical facts regarding an analysis of between station temperature variations are missing. We are left with the cost side of the balance loaded with $210 to $410 million in costs projected by the CEC over the first 20 years in California alone. The benefit side contains only a meager $3.8 million in potential economic benefits for California and the vague promise of some increased fairness. The consumers I speak for want to know that ATC will either get them more fuel for their dollar or get them better fuel that carries their vehicle farther. Where is the evidence to suggest either will happen if we implement ATC? Frankly it does not exist!

References:

1. ATC as a Better, More Comprehensive Form of Measurement, Henry Oppermann, Weights and Measures Consulting, LLC, testimony submitted to NCWM L&R Committee, June 14, 2009.

2. Checking the Net Contents of Packaged Goods, NIST Handbook 133 (Fourth Edition), January 2005, refer to section 1.2 on pages 2-3.

3. Specifications, Tolerances and Other Technical Requirements for Weighing and Measuring Devices, NIST Handbook 44 (2009 Edition), January 2009, refer to Appendix A. Fundamental Considerations sections 2.2. and 2.3.

4. Fuel Delivery Temperature Study, California Energy Commission, Transportation Committee, January 2009, Report No. CEC-600-2009-002-CTF.

5. Comments on the California Energy Commission's Fuel Delivery Temperature Study, Kevin M. Murphy & Robert H. Topel, University of Chicago, January 12, 2009.

6. An Economic Analysis of the California Energy Commission Staff's Fuel Delivery Temperature Study and the "Hot Fuel" Allegations, Michael A. Flynn, LECG, testimony submitted to the Commission and also distributed at the NCWM Interim Meeting, January 2009.

7. Alaska Fuel Metering Project (Draft May 18, 2009), Northern Economic Research Associates, www.alaskafuelproject.com

THIS PAGE INTENTIONALLY LEFT BLANK