Ken Wells

Guiding Sustainability

CLIMATE PROTECTION: EVERYBODY PROFITS 2010 CONTEST

Contact Person: Ken Wells
Email: jfish@sonic.net
Mailing address: 360 Brey Road
Santa Rosa, CA 95409
Phone number: 707-538-9389

Title: **CLEAN AIR FEE** - A Local Pricing Tool for Reducing Greenhouse Gas Emissions

200 word description of the Clean Air Fee:

In California, Propositions 13 and 218 are major barriers to implementing new taxes by local governments. The only tools left to raise revenues, without the expense and risks of an election, are fees for (1) services, like sewer and water, (2) impacts of an activity, such as development fees, or (3) regulatory costs, like Certified Unified Program Agency fees.

The health impacts of air pollution in California have been calculated at $7/person/year to $1,100/person/year, depending on the range of costs examined.

A local regulatory fee to counter the adverse impacts from use of petroleum fuel can be adopted by a majority vote of the elected leaders in that jurisdiction.

Sonoma County is projected to use about 227 million gallons of petroleum fuels in 2010, with about 80 million gallons sold in Santa Rosa. A Clean Air Fee of $0.005/gallon would generate $400,000/year in Santa Rosa, enough to fund a Safe Routes to School program for all Santa Rosa City Schools.

Adoption of a Clean Air Fee in Santa Rosa could be accomplished within a year, and a City-wide SRTS program could be implemented concurrently. This effort could reduce GHG emissions by 1,860 tons/year at a cost of $215/ton, starting in 2011.

Endorsement of Clean Air Fee CP:EP 2010 Contest Submittal:

Jenny Bard, Regional Air Quality Director
American Lung Association in California
JBard@alac.org 707-527-5864

If I am so fortunate, a check for my winning entry can be made out to Ken Wells and sent to the mailing address above.

CLIMATE PROTECTION: EVERYBODY PROFITS 2010 CONTEST

THE CLEAN AIR FEE

A Local Pricing Tool for Reducing Greenhouse Gas Emissions

A. *Description of the Clean Air Fee.*

This local pricing tool sets a fee on petroleum fuel sold in a typical Sonoma County jurisdiction (Santa Rosa is used as an example in this document) to pay for the local portion of the public health cost impacts from using those fuels. The funds generated can only be used to reduce those impacts. A local regulatory fee used to counter the adverse impacts from use of petroleum fuel can be adopted by a majority vote of the elected body for that jurisdiction and does not require voter approval.

B. *Objective of the Clean Air Fee.*

The primary objective of the Clean Air Fee is to establish an ongoing revenue stream that can be quickly and efficiently implemented locally to reduce the current and future adverse economic impacts directly caused by the use of petroleum fuels. And with the selected mitigation for these impacts, i.e., reducing school-generated traffic through biking and walking, there are also significant concurrent community fitness and health benefits. And by reducing fuel use, there are reduced GHG emissions.

C. *Barriers addressed by the Clean Air Fee.*

Economists generally agree the most efficient way to reduce GHG emissions is to put a price on those emissions. However, the voters of California have approved Constitutional Amendments (Prop 13 and Prop 218) that create a substantial barrier, i.e., voter approval, to apply taxes and collect new revenues at the local and state government level.

Through legal challenges to these Constitutional limits on the taxing authority of local and state government, the courts have clarified the means available to local governments in California to raise revenues. Currently, the only way local governments can collect new sources of revenue (without going through the expense and risks of an election) are establishing fees for:

(1) services, like water and sewer,
(2) impacts of an activity, like development and building permits, or
(3) regulatory fees, such as Certified Unified Program Agency (CUPA) fees.

In the 1997 decision by the California Supreme Court, *Sinclair Paint Company v. State Board of Equalization*[1], the Court ruled that a fee for regulating an environmental impact was not subject to the Prop 218 election requirements. However, the revenue generated from this fee can only be used to counter the past, present, and future adverse impacts resulting from use of the regulated product. A local regulatory fee that addresses these impacts can be adopted by a majority vote of the applicable jurisdiction's governing body.

The courts have further defined that regulatory fees are not special taxes subject to Prop 218 voter approval if these three requirements are met:

1] Nexus
There must be a causal relationship, or nexus, between the product being regulated and the adverse effects the fee is designed to mitigate.

2] Proportionality
The total amount of fees collected by the government cannot exceed the total cost of the mitigation for the impact or related regulatory program.

3] Earmarked Funds
The fees can only be used to fund the regulatory program established to counter the past, present, and future adverse impacts resulting from use of the product.

In order to use the regulatory authority of the local government these three tests must be met to avoid claims of an illegal special tax.

The Clean Air Fee, as proposed in this document, clearly meets these criteria.

Nexus -

A number of recent studies have measured the cost of the health impacts of air pollution in California, which range from $7/person/year to $1,100/person/year. This is equivalent to $1M to over $175M of health impacts to the Santa Rosa community annually.

The 2010 Rand Corporation study, "*The Impact of Air Quality on Hospital Spending*[2]", examined only hospital costs associated with air pollution in California, determined that these costs are equivalent to $6.67/person/year.

The Public Policy Institute of California, in their report, "*Climate Change Challenges*[3]", March 2010, identifies $65/person/year in medical costs, lost work days, and mortality costs to Californians.

The 2008 report, "*The Benefits of Meeting Federal Clean Air Standards*[4]" by Cal State Fullerton, identified $1,100/person/year costs for treating illness and the expressed value that people place on avoiding illness and premature death.

According to the Bay Area Air Quality Management District, about 60% of the air pollution generated in Sonoma County is created by the use of petroleum fuels[5].

There is now an established and clear record documenting the economic impacts of the adverse health effects from the use of petroleum fuels.

Proportionality -

The total amount of fees collected by the government cannot exceed the total cost of the mitigation of the problem and the fees must also be levied in proportion to the problems created by the entity that pays the fee.

Using the range of measured health care impacts caused by air pollution, then discounting the 40% of air pollution not created by petroleum fuels, a city the size of Santa Rosa with a population of 161,500 could set a Clean Air Fee that would collect a maximum of $650,000/year at $6.67/person up to $100M/year using a $1,100/person health cost impact.

Sonoma County is projected to use about 227 million gallons of gasoline and diesel in 2010[6], with an estimated 1/3rd or 80 million gallons sold in Santa Rosa.

A Clean Air Fee on petroleum fuels, limited to the cost of that product's local air pollution impacts, and applied on a per gallon basis sold to the consumer, would meet both proportionality tests.

To put these quantities in perspective, a regulatory fee of $0.01/gallon would raise $800,000 annually in Santa Rosa, while a fee of $1.25/gallon would generate $100M/year, at current consumption levels.

Earmarked Funds -

Local efforts that have had a measureable impact on reducing the use of petroleum fuel, and the associated present and future adverse impacts of fuel combustion, have been the Safe Routes to School (SRTS) and Cool Schools programs to reduce use of motor vehicles to get students to and from school.

The Sonoma County Bicycle Coalition has suggested that $400,000/year (~$20,000/school/year) could fund a SRTS program for all 22 Santa Rosa City Schools.

A Clean Air Fee of $0.005/gallon (1/2 penny per gallon) would generate $400,000/year in Santa Rosa, and if it were explicitly dedicated to programs that reduce the burning of petroleum fuels, would meet the nexus, proportionality and the earmarked fund requirements of a regulatory fee.

D. ***Description of agencies responsible for implementation of the Clean Air Fee.***

The City of Santa Rosa is offered as an example of a community for the implementation of the Clean Air Fee, but any local jurisdiction authorized to levy regulatory fees with a local gas station would be able to apply this tool.

The various agencies and organizations responsible for implementing this Clean Air Fee include:

The City will need to notify the sellers of petroleum fuel that operate in the City of the new Clean Air Fee and the fee-setting process and then contract with the California Board of Equalization to collect the fee from those sellers.

The City Schools will be responsible for cooperating with efforts to reduce student-related petroleum fuel use.

Direct contact behavior change programs such as SRTS can be implemented by various agencies, but two local organizations with proven track records are the Climate Protection Campaign and the Sonoma County Bicycle Coalition.

E. ***Projection of amount of and timeline for greenhouse gas to be reduced by the Clean Air Fee.***

The following projection of the amount and timeline for GHG reductions by the Clean Air Fee is based on the example of the City of Santa Rosa, with estimated fuel sales of 80 million gallons annually, a Clean Air Fee of $0.005/gallon (½ penny per gallon), generating $400,000/year, and used to fund direct contact behavior change programs, such as Safe Routes to School and Cool Schools, to reduce student-generated auto traffic at all schools in the Santa Rosa City Schools district.

The Clean Air Fee can be implemented as rapidly as an ordinance can be drafted and applied, estimated at six months. Establishing SRTS programs can be developed concurrently, and then implemented in coordination with the school year and the Clean Air Fee. The experience gained from earlier Sonoma County SRTS and Cool Schools projects shows that GHG reductions can begin within weeks of initiation of school programs.

Using data published by the Climate Protection Campaign for the Cool Schools eCO2mmute[7] programs at Analy High School in Sebastopol, Windsor High School, and Healdsburg High School, it can be estimated that there will be an average of 227 lbs/student/year of GHG reductions after one year of effort. *(details in Appendix)*

According to *The Data Source Book*, Santa Rosa City Schools[8] had a population of 16,404 students in 2006-7.

If a Cool Schools/SRTS direct contact program were applied and similarly successful in the Santa Rosa City Schools district, there would be annual direct GHG reductions of about 1,860 tons, with that reduction quantity compounding annually as new classes of students arrive and change behaviors and some individuals continue the reduced fuel use behaviors after leaving school.

F. ***a) Implementation budget and source of funding for the Clean Air Fee.***

The primary costs for the establishment of the Clean Air Fee are associated with staff time and legal fees for development and enactment of the Clean Air Fee regulations. These costs can be included as a part of the administrative costs for the regulation. These initial development costs and subsequent, ongoing administrative costs can be recouped from the collected Clean Air Fee after its application. The other major implementation cost is for development of the direct contact behavior change programs (SRTS/Cool Schools). Initial development of the City-wide program will require up-front funding on the order of $10-50,000, which can be borrowed from future Clean Air Fee revenues.

b) Return on investment and recipient of savings.

Although the Clean Air Fee is not a capital investment, it is an investment in behavior change. With the desired behaviors started at an early age, some students will continue biking and walking later in life, and will influence others, making it more commonplace. This ongoing community behavior, in combination with continued efforts in the schools, will have a compounding effect, generating interest on the behavior change investment.

The resulting immediate recipient of the savings will be the health care system, which will have fewer illnesses and health cases related to air pollution and lack of exercise.

Using the language of the economist, the Clean Air Fee is a tool that shifts the external health care costs of using petroleum fuel from the community at large to the user of the product, thus internalizing those costs of consuming this product.

c) Financial projections by year for implementation.

Future financial projections are dependent on future petroleum fuel use in Santa Rosa and changes to the Clean Air Fee by the City Council. At current fuel consumption rates and with a $0.005 (½ penny) per gallon Clean Air Fee, about $400,000 would be generated in the first year. Following years' financial budgets should be based on monitoring and measuring behavior changes, and making adjustments to collection rates and the school programs based on that information.

d) Estimate of the cost per ton of greenhouse gas reduced.

Recent documents submitted to the Sonoma County Transportation Authority by the Sonoma County Bicycle Coalition indicated that a County-wide Safe Routes to School (SRTS) Program would cost $750,000 annually or about $20,000/school/year. There are 22 schools in the Santa Rosa City Schools district, resulting in an estimated cost of $400,000/year for a SRTS at every school.

With a cost of $400,000 and a reduction of 1,860 tons, the cost per ton of GHG reduced is $215/ton initially, with benefits compounding annually as new students are contacted and behaviors changed each succeeding year.

G. ***a) How politically feasible is the Clean Air Fee?***

The Clean Air Fee is very politically feasible, as the proposed fee is essentially insignificant to the purchasers of the petroleum fuel. It's common to see gasoline prices vary by 5-10 cents/gallon between stations located across the street from one another. A price increase of ½ cent per gallon is not noticeable. With fuel prices around $3/gallon, a $0.005/gallon Clean Air Fee is an increase of less than 0.2%. And the decision to implement the fee is made by the jurisdiction's governing board, not the voter.

b) How replicable and scalable is the Clean Air Fee?

The Clean Air Fee is very replicable and is scalable, in some respects. The Clean Air Fee can be replicated in any California jurisdiction that has the authority to establish ordinances and implement regulatory fees and has businesses that sell petroleum fuel products to consumers.

The Clean Air Fee is based on the measurement, in economic terms, of air pollution impacts of consuming petroleum fuels. As the science and economic measurement systems progress and the economic impacts can be more precisely measured, the maximum range of the Clean Air Fee can be better determined. The proposed Clean Air Fee of $0.005/gal was selected as it would generate fee revenue significantly below the cost of the impacts being mitigated, avoiding arguments that the fee is too high, or out of proportion to the economic impacts of the product.

Another more significant attribute of the Clean Air Fee is the application flexibility. This document selected the Safe Routes to School/Cool Schools programs as they have measured results that could be quantified for this proposal. However, the Clean Air Fee can be used for any action that mitigates past, present, and future effects of the consumption of petroleum fuel.

c) How is the Clean Air Fee socially just?

The Clean Air Fee, as a fee, is relatively insignificant to consumers, representing less than 0.2% of the cost of fuel today. The social equity question is better addressed on the use of the Clean Air Fee. The example used in this document focused on school traffic as a target for air pollution mitigations. The Clean Air Fee could also be used for other actions, like subsidized bus passes, that also mitigate air pollution impacts.

Footnotes for the CLEAN AIR FEE

[1] ***Sinclair vs. BOE***, California Supreme Court filing – www.caltax.org/sinclair.htm

[2] ***The Impact of Air Quality on Hospital Spending*** - www.rand.org/pubs/technical_reports/2010/RAND_TR777.sum.pdf

[3] ***Climate Change Challenges Vehicle Emissions and Public Health in California*** - www.ppic.org/content/pubs/report/R_310LBR.pdf

[4] ***The Benefits of Meeting Federal Clean Air Standards in the South Coast and San Joaquin Valley Air Basins*** -

press article: http://calstate.fullerton.edu/news/2008/091-air-pollution-study.html

full report: http://business.fullerton.edu/centers/iees/reports/Benefits_of_Meeting_Clean_Air_Standards_11-13-08.pdf

[5] ***EMISSIONS INVENTORY SUMMARY REPORT***, BAY AREA AIR QUALITY MANAGEMENT DISTRICT, December 24, 2008, Table 16, 2005 Sonoma Annual Average Emissions - www.baaqmd.gov/~/media/Files/Planning%20and%20Research/Emission%20Inventory/summaryreport_final_april_08_09.ashx

[6]***2008 CALIFORNIA MOTOR VEHICLE STOCK, TRAVEL AND FUEL FORECAST*** prepared by California Department of Transportation, Division of Transportation System Information - www.dot.ca.gov/hq/tsip/smb/documents/mvstaff/mvstaff08.pdf

[7] ***Cool Schools eCO2mmute***, Climate Protection Campaign - www.climateprotectioncampaign.org/Cool%20Schools/Cool%20Schools_eCO2mmute_March09.pdf

[8] ***The Data Source Book***, Santa Rosa City Schools - www.srcs.k12.ca.us/forms/datasourcebook0607.pdf

Appendix for the CLEAN AIR FEE

GHG Calculations

GHG Impacts of Direct Contact Programs (Cool Schools for high schools, Safe Routes to School for elementary schools)

Analy H.S. – 1,400 student body, 2,100 gallons of gas/week
(40,000 lbs ghg/week all students or 28.6 lbs/student/week or 1,486 lbs/student/year)
- 21% reduction w/ direct contact programs in 2006
(8,400 lbs reduction/1,400 students/week or 6 lbs/student/week or **312 lbs/student/year**)

Windsor H.S. – 1,200 student body, 1,750 gallons of gas/week
(33,000 lbs ghg/week all students or 27.50 lbs/student/week or 1,430 lbs/student/year)
- 7% reduction w/ direct contact program 2007
(2,310 lbs reduction/1,200 students/week or 1.9 lbs/student/week or **100 lbs/student/year**)

Healdsburg H.S. – 950 student body, assume emissions of 1,458 lbs/student/year or 26,600 lbs/week
-18% reduction w/ direct contact programs 2007-8
(4,795 lbs/reduction/week all students or 5 lbs/student/week or **262 lbs/student/year**)

Weighted Average **227 lbs/student/year GHG reduction after one year of effort**

Santa Rosa City Schools had a population of 16,404 students in 2006-7

If a Cool Schools/SRTS direct contact program were applied and similarly successful in the **Santa Rosa City Schools district, annual GHG reductions of 1,860 tons.**

CLEAN AIR FEE SUMMARY and Self-Scoring

1. ***Will the Clean Air Fee produce significant, rapid greenhouse gas emission reductions?***

   KW score – 20 points out of 35

   The proposed Clean Air Fee can be rapidly implemented, although immediate GHG emission reductions will be small. The reduced GHG emissions can be expected to grow at a compounded rate and to establish permanent transportation behavior changes.

2. ***Is the Clean Air Fee cost effective and good for the local economy****?*

   KW score - 20 points out of 25

   The GHG reductions are measured at $215/ton in the first year, with per ton rates dropping as the program engages successive classes of students, with an insignificant impact to each individual purchasing petroleum fuel. The overall impact on the local economy will be positive with additional educators and others hired to work with school staff, students, parents and other stakeholders.

3. ***Is the Clean Air Fee practical, implementable and politically feasible?***

   KW score – 12 points out of 15

   A major attribute of the Clean Air Fee is its pragmatic approach using very minor fees to generate significant revenues all under local elected body control.

4. ***Is the Clean Air Fee scalable, replicable?***

   KW score – 15 points out of 15

   The Clean Air Fee approach can be used for other local environmental impacts with measureable costs and in any jurisdiction with the authority to establish regulatory ordinances and set fees. The Clean Air Fee can be increased as the economic impacts of air pollution are better defined.

5. ***Overall clarity, completeness and credibility of the Clean Air Fee entry?***

   KW score – 8 points out of 10

   All questions and discussion items were addressed, citations were provided for most critical facts, and the concept was clearly presented. More details would take more pages.

6. ***Is the Clean Air Fee socially just?***

   KW score – 5 points out of 15

   The Clean Air Fee is relatively insignificant to consumers, representing less than 0.2% of the cost of fuel today. The Clean Air Fee can be used to address social justice issues, as long as the actions also reduce petroleum fuel use. For example, the Clean Air Fee could be used for subsidized bus passes, another action that mitigates air pollution impacts.

Total KW Score – 80 points