

Market paths

out of gridlock

POLLUTION:
Buying and selling
'emissions credits'

By James E. Moore II

Many California policy makers contend that more coordination is the key to better government, and a better way of life for the state's residents. These public servants are correct, but much depends on how this coordination is accomplished. Unfortunately, public authority usually attempts to achieve coordination by creating command and control regulations. The big problem with regulation is that it requires regulators; and regulators require salaries, health benefits, retirement plans, staff support, and (ultimately) taxes. These expenditures would be easier to tolerate if regulation actually resulted in coordination. It most often does not, and many agencies are looking for alternative ways to get the job done.

The most important local example is probably the South Coast Air Quality Management District (SCAQMD). The SCAQMD implements the provisions of the Air Quality Management Plan, designed to bring the South Coast Air Basin into compliance with federal and state air-quality standards. The measures defined in this three-tier plan touch business and residential life at many levels, and often in ways that are expensive to implement. The district board recently voted to suspend work on 24 smog rules related to the plan. They have good reasons. Consider an example:

One element of the Air Quality Management Plan calls for reductions in vehicle miles traveled (VMT) during work trips. The district's Regulation XV requires firms with 100 or more employees to file an acceptable trip reduction plan providing employees with incentives to car pool or otherwise reduce vehicle trips. The district's internal standard for evaluating trip-reduction plans requires the district respond to each initial submission within 60 days. Six months was not unusual, and a year was not out of the question. Resubmissions routinely took more than 60 days to process. Regardless of these delays, an employer could still be fined \$25,000 per day if his or her plan was not accepted on schedule.

One way to evaluate trip reduction plans more quickly is to hire more evaluators, but the SCAQMD staff already includes more than 1,100 souls. Fortunately, instead of putting more professionals on the public payroll, the SCAQMD cleared up its 1991 backlog with a massive internal effort involving overtime and new assignments for many district personnel. It is not that the SCAQMD was working inefficiently. Rather, the district was and is working hard to meet an extremely expansive mandate, but has had trouble doing so by regulatory means.

It is likely to have more problems, particularly with respect to nonstationary pollution sources like automobiles. The district's Special Commission on Air Quality and the Economy recently reported that it received more complaints about employer requirements for trip reduction plans than any other district policy. Further, the US Ninth Circuit Court of Appeals ruled that the Environmental Protection Agency must implement, possibly with revision, a 1990 EPA plan intended to address pollution-reduction alternatives not mandated by the SCAQMD. The district's Air Quality Management Plan includes a much greater emphasis on work trips than on nonwork trips. Consequently, even a revised EPA plan for Los Angeles might retain such Draconian regulations as prohibitions on driving one day per week.

Regulation is not the only way of achieving coordination, and the SCAQMD is more than a little interested in developing alternative approaches. Markets produce predictable, highly ordered outcomes; but they place the burden of coordination on market participants, not regulators. Further,

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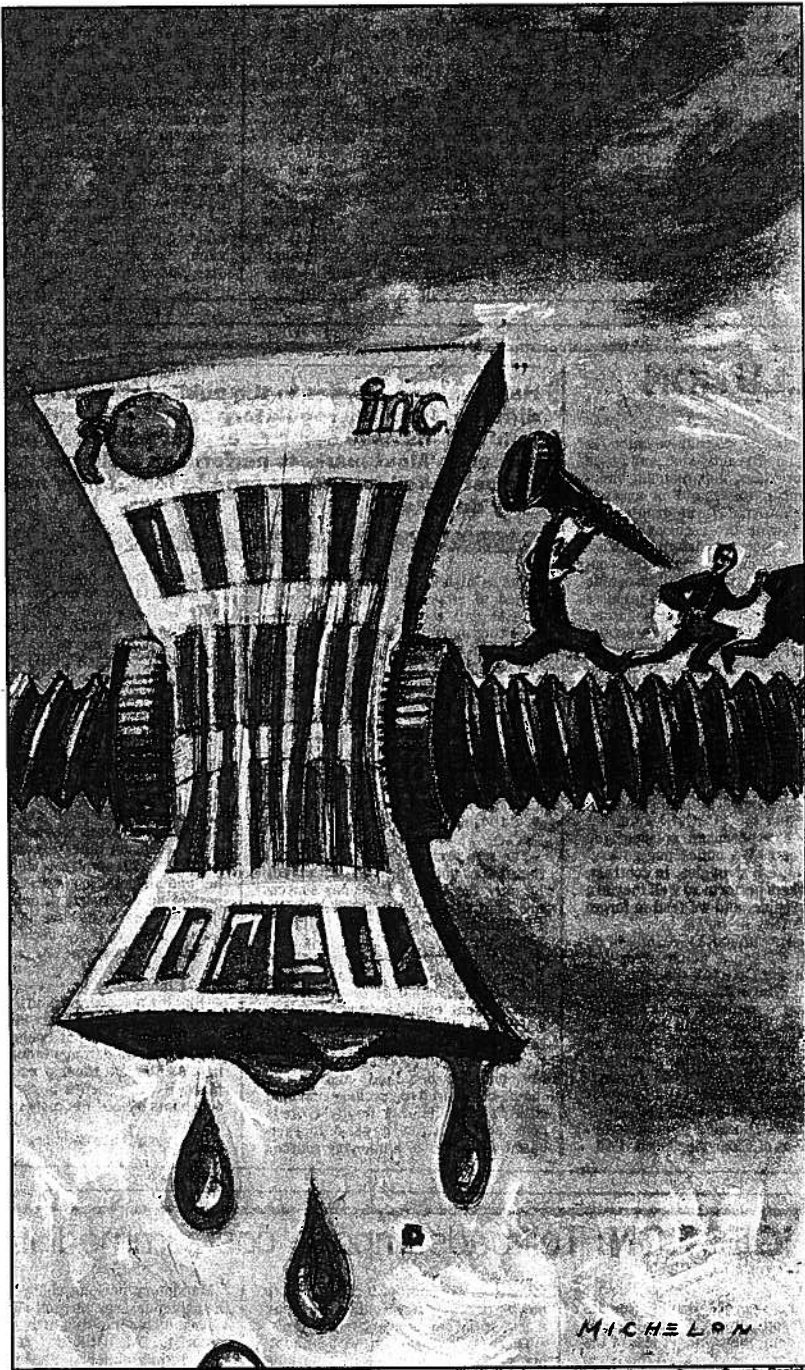


Illustration by Marc Michelson for The Orange County Register

markets reduce guesswork by defining prices that producers and consumers use as signals to coordinate their decisions and to compare the values of different alternatives.

Some markets are subject to perverse characteristics that cause them to produce inefficient results, but the SCAQMD has realized that it may be possible to restructure these markets in ways that lead to efficient outcomes. One way to treat pollution is as a cost of production that producers do not pay. Structure a market for environmental quality in which polluters are permitted to pollute, but required to pay for the environmental damage caused by their decisions, and the cost of what

pollution occurs will never exceed the value of the goods being produced. Additional advantages in the form of cheaper goods, more jobs, and a cleaner environment accrue if the number of regional pollution rights is capped, and these rights are allowed to be bought and sold on a regional market.

Early in 1992, the SCAQMD board undertook a sweeping departure from the regulatory approach by voting to create a Regional Clean Air Incentives Market (RECLAIM). RECLAIM applies to

Please see POLLUTION/K2

POLLUTION

FROM K1 facilities holding district permits for the emission of reactive organic gases or nitrogen oxides, and producing annual emissions in excess of four tons per year. These firms will be granted the latitude to achieve present and future emissions targets by changing production processes, installing pollution control equipment, purchasing tradeable emissions credits from firms that have already managed to reduce pollution, or by some combination of these strategies. The price of emissions credits will be determined by supply and demand. RECLAIM defines a market of about 2,700 facilities, and may be expanded to include and additional 100 sites that emit sulfur oxides.

Harnessing a market to the public interest is quite different from the regulatory activities Southern Californians have come to expect from their public servants, and the SCAQMD's market initiative has produced considerable public debate. We notice our government because it struggles. In contrast, most markets perform so well they are almost invisible, and we tend to forget how much they do for us.

Critics argue that RECLAIM will be expensive to organize and monitor, but this is not the case. Markets are self organizing. The arbitragers who make their living organizing more conventional transactions would be just as happy to earn commissions by selling brokerage services to firms participating in RECLAIM. In 1991, the Chicago Board of Trade voted to establish a futures market for the tradeable sulfur dioxide rights allocated to utilities under the federal Clean Air Act of 1990.

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The SCAQMD is already heavily invested in emissions monitoring. RECLAIM will require a more careful emissions inventory than is currently in place, but there are many ways to accomplish this. The district's current permitting program requires such careful evaluation of flow and production processes that the SCAQMD could make very good emissions estimates by using production records to track product flows. Better yet, continuous emissions monitoring is a well defined technical objective that many third parties would be interested in undertaking for a fee.

The real problem with RECLAIM is that it does not go far enough. Currently, only the largest emissions sources are able to avail themselves of RECLAIM. All firms that emit regulated pollutants should be allowed to participate in the new market. In addition, market principles dictate that individual facilities should be allowed to exceed current emissions levels if it is worth it to them to pay for the necessary credits. Further, original pollution rights should not be attached to activities, but to urban land; and anyone should be allowed to purchase and hold emissions credits. And, finally, there is no reason to restrict the use of market-based strategies to stationary sources

of pollution. Now is the time for the SCAQMD to extend RECLAIM by defining market-based pollution control measures for automobiles and other nonstationary sources of pollution. If the district acts now, the EPA may be able to avoid imposing a much more burdensome set of regulation currently under consideration.

A tradeable pollution-rights approach would be too unwieldy to apply in the case of transportation, but the economics of the marketplace still provide a prescription for how to proceed. A traveler's decision to consume freeway space imposes congestion and pollution costs on other users and local residents. This small contribution to delay and air pollution is part of the true cost of an additional vehicle trip, but these external costs have no bearing on the vehicle occupants' decision to travel because these are costs the occupants do not pay. An optimal road toll would internalize these external costs so that the travel price paid by the additional vehicle's occupants includes the cost of the additional congestion and environmental damage induced by the trip. As a result, the trip would only be taken if the benefits to the vehicle's occupants exceed the costs imposed on society.

Such results are not mere conjecture.

Power utilities price electricity according to a similar scheme. It works. Most of the people who want to purchase electricity can do so at an affordable price from a system that is 99.9 percent reliable. Further, nobody has to stand in line to receive or pay an electric bill. The technology needed to implement automatic toll assessment on roadways is only slightly more sophisticated than the procedures already used by utilities and telephone companies, and no more intrusive.

The most entrenched opponents to market-based strategies like RECLAIM and road tolls argue that distributional effects of these approaches are uncertain. There is no question that RECLAIM would reduce total emissions, but some areas could experience greater local concentrations of pollution. Similarly, there is no question that road tolls would reduce both delay and vehicle emissions to efficient levels. But do such outcomes impose too large a burden on the poor?

In either case, the answer depends on how any new public revenues might be generated are returned to society. For example, the income resulting from the sale of emissions credits is certainly taxable, and these new tax revenues could be distributed in many ways. By the same token, if low-income groups benefit from programs funded by tolls, then the net effect of road pricing could be profoundly progressive. Market-based strategies offer both more efficiency and more control over distributional impacts than do conventional regulatory approaches. There are many ways California authorities can employ market-based strategies to improve residents' quality of life. Unfortunately, we keep trying to do things the hard way.

CONGESTION: Tollroads impose costs immediately and directly

FROM K1 to afford the costs of satisfying Regulation XV, and, because there are so many of them, they will get less of the free assistance from OCTA that has been available to larger employers for years. The AQMD is also giving serious consideration to going beyond Regulation XV by requiring employers to charge their employees for the privilege of parking at work, and requiring cities to charge for public parking. Mandating parking charges at work was also recommended in a report recently made to the Orange County Regional Advisory and Planning Council.

Charging for parking is a way of imposing costs for driving. Imposing costs for driving is, in itself, a sound idea. We overuse our freeways in the same way that villagers in old England would overuse the common pasture; rather than use up their own pastures, villagers would put their sheep on the common pasture that all could use without charge. So many villagers used the common that it was soon overgrazed to the point that it could no longer support any sheep.

We pay for using the freeways, but we don't pay for it directly when we turn onto the on-ramp. Instead, we pay for it invisibly at the gas pump, and we seldom make the connection between driving on the freeway and paying highway

taxes at the gas pump. If people had to pay for parking, they would have to pay a cost at the end of every trip to work.

There are two problems with mandating parking charges. First, parking charges have not been shown to be effective travel reduction measures in suburban areas like Orange County. Parking charges have been shown to increase the use of commute alternatives in areas like San Francisco and downtown Los Angeles, where the high employment density allows much more complete transit coverage.

In areas like Orange County, where employment density is too low to make that kind of transit service feasible, parking charges have had very little effect. Second, mandatory parking charges would be another source of aggravation and administrative costs for businesses that are already staggering under the burden of some of the highest taxes in the nation, runaway workers' compensation costs, high real estate prices, and AQMD's other pollution regulations.

Other states are already doing an effective job of luring Southern California employers away with conditions that are much more friendly toward business. We are going to have to stop putting more and more burdens on the backs of business if any jobs are going to be left here in Orange County.

Mandatory parking charges are not the only measures currently under consideration for imposing travel costs on motorists. The OCRAPC report concluded that either a \$1.50-per-gallon gasoline tax or a 3-cent-per-mile travel tax to be paid when renewing one's vehicle registration were the two measures that would achieve the greatest reduction in motor vehicle travel. Both measures are intended as financial punishments for driving alone, but neither is immediate enough nor has a clear enough connection to actually using the freeway to make an effective punishment. The \$1.50 gasoline tax would force some people to use commute alternatives out of sheer economic necessity, but this benefit would be vastly outweighed by the terrible impact such a tax would have on self-employed people who use their vehicles to make a living, as well as any business that delivered goods or used field personnel for sales or services.

Imposing costs for using the freeways is the only way to achieve a meaningful reduction in motor vehicle travel. However, these costs need to be imposed immediately upon using the freeway and they need to be paid directly by the motorist. Forcing the motorist's employer to serve as the middleman, or charging drivers a tax on Sunday for the driving they did during the week

will not do. In short, we need to convert our highways to tollways.

The traditional objection to tollways is the notion that they would have a disproportionate impact on the poor. Ironically, this objection has not been raised to the idea of a \$1.50-per-gallon gas tax, which would hit the poor at least as hard.

If the Democratic leadership in the state Legislature is so concerned about the effect of tolls on the poor, it can always provide tax deductions or tax credits for tolls. Tolls won't be easy on the pocketbooks of the middle class, either; to provide them with some relief, the imposition of tolls should be accompanied by the elimination of state gasoline taxes. The tolls will bring in more money than existing gas taxes ever did. To ease the impact of tolls on businesses and the self-employed, tolls can and should be lower at off-peak hours.

Traffic congestion and air pollution are not things that we simply have to live with. Both problems can be solved, but not through more centralized planning, more government regulation, or more taxes. We can free up our highways, clean up our air, and preserve what health the local economy has left by letting people make their own choices about travel, and requiring them to directly pay the consequences of those choices.