

**CITY COUNCIL MEETING
TUESDAY, MARCH 3, 2020**

**DOCUMENTS RECEIVED
AFTER PUBLISHED AGENDA**

ITEM #5 LB 20-002

**ELECTRIFICATION REACH CODES: ADOPT A
RESOLUTION AND INTRODUCE AN ORDINANCE
TO ADOPT ELECTRIFICATION REACH CODES
FOR THE 2019 CALIFORNIA ENERGY CODE AND
CALIFORNIA GREEN BUILDING STANDARDS
CODE**

Revised Resolution

HAYWARD CITY COUNCIL

RESOLUTION NO. 20-

Introduced by Council Member _____

RESOLUTION FINDING AND DETERMINING THE NEED FOR ADOPTION OF MODIFICATIONS TO THE 2019 CALIFORNIA BUILDING STANDARDS CODE

WHEREAS, in 2014, the City of Hayward adopted the Hayward 2040 General Plan including policies to reduce community and municipal operational emissions by 20% below 2005 baseline levels by 2020, 61.7% by 2040, and 82.5% by 2050; and

WHEREAS, on September 18, 2018, California Governor Jerry Brown signed Executive Order B-55-18, committing California to achieving carbon neutrality no later than 2045, and achieving and maintaining net negative emissions thereafter; and

WHEREAS, the countries that signed the 2015 Paris Agreement vowed to keep warming this century “well below 2°C above pre-industrial levels” and to “pursue efforts to limit the temperature increase even further to 1.5°C.”; and

WHEREAS, scientific evidence has established that natural gas combustion, procurement and transportation produce significant greenhouse gas emissions that contribute to global warming and climate change; and

WHEREAS, the electric space heating, water heating, cooking appliances, and clothes drying equipment associated with all-electric, buildings is linked to significantly lower greenhouse gas emissions and reduced costs to build; and

WHEREAS, all-electric building design benefits the health, welfare, and resiliency of the City of Hayward and its residents; and

WHEREAS, the most cost-effective time to integrate electrical infrastructure is in the design phase of a building project because building systems and spaces can be designed to optimize the performance of electrical systems and the project can take full advantage of avoided costs and space requirements from the elimination of natural gas piping and venting for combustion air safety; and

WHEREAS, the City Council Sustainability Committee received reports and presentations on building and vehicle electrification reach codes on July 16, 2018, January 14, 2019, May 13, 2019, September 17, 2019, and October 30, 2019; and

WHEREAS, on October 30, 2019, Hayward’s City Council Sustainability Committee recommended adoption the draft reach codes; and

WHEREAS, Public Resources Code Section 25402.1(h)2 and Section 10-106. of the Building Energy Efficiency Standards (Standards) establish a process which allows local adoption of energy standards that are more stringent than the statewide Standards, provided that such local standards are cost effective and the California Energy Commission finds that the standards will require buildings to be designed to consume no more energy than permitted by the California Energy Code; and

WHEREAS, local agencies that adopt energy standards which exceed minimum Building Energy Efficiency Standards must demonstrate that the requirements of the proposed ordinance are cost effective and do not result in buildings consuming more energy than is permitted by Title 24; and

WHEREAS, the California Codes and Standards Reach Code Program, has determined specific modifications to the 2019 State Energy Code for each climate zone that are cost effective; and

WHEREAS, that such modifications will result in designs that consume less energy than they would under the 2019 State Energy Code; and

WHEREAS, based upon these analyses, the City Council of the City of Hayward finds that the local amendments to the California Energy Code contained in this ordinance are cost effective and will require buildings to be designed to consume no more energy than permitted by the California Energy Code; and

WHEREAS, the provisions in this Ordinance are designed to reduce greenhouse gas emissions; increase resource conservation; provide durable and sustainable buildings that are efficient and economical to own and operate; promote the health and productivity of residents, workers, and visitors to the City recognize and conserve the energy and reduce the environmental footprint of new developments; and reduce disturbance of natural ecosystems; and

WHEREAS, adoption of the reach codes as part of the 2019 California Building Standards Code is consistent with and would advance goals and policies contained in the Hayward 2040 General Plan related to climate change, greenhouse gas reductions, and public health and safety; and

WHEREAS, California Health and Safety Code section 17958 requires that cities adopt building regulations that are substantially the same as those adopted by the California Building Standards Commission and contained in the California Building Standards; and

WHEREAS, the California Energy Code is a part of the California Building Standards which implements minimum energy efficiency standards in buildings through mandatory requirements, prescriptive standards, and performances standards; and

WHEREAS, California Health and Safety Code Sections 17958.5, 17958.7 and 18941.5 provide that the City may make changes or modifications to the building standards contained in the California Building Standards based upon express findings that such changes or

modifications are reasonably necessary because of local climatic, geological or topographical conditions; and

WHEREAS, the City Council of the City of Hayward finds that each of the amendments, additions and deletions to the California Energy Code contained in this ordinance are reasonably necessary because of local climatic, geological or topographical conditions described in Section 1.

NOW, THEREFORE, BE IT RESOLVED that the aforementioned amendments to the *2019 California Building Standards Code*, are based on local climatic, geological, or topographical conditions. The "Findings of Facts" contained herein addresses present local conditions which either singularly or in combination cause the aforementioned amendments to be adopted.

SECTION 1: FINDINGS AND DETERMINATIONS.

The following local climatic, conditions justify modifications to the California Building Standards Code.

1. The City of Hayward is already experiencing the repercussions of excessive greenhouse gas emissions including increased temperatures and more extreme weather events, decreased precipitation, and increased wildfire risk. From 2012 to 2017, Hayward, like the rest of the State, experienced one of the worst droughts on record.
2. Portions of the City of Hayward are situated along a wildland-urban interface and are extremely vulnerable to wildfires, and human activities releasing greenhouse gases into the atmosphere cause increases in worldwide average temperature, drought conditions, vegetative fuel, and length of fire seasons—all of which contribute to the likelihood and consequences of fire.
3. The City of Hayward's natural gas building infrastructure is a potentially significant source of fire during earthquakes, fire, and other natural disaster events.
4. Marginalized communities in the City of Hayward and worldwide—including people of color, immigrants, indigenous communities, low-income people, those with disabilities, and the unhoused—are already disproportionately affected by climate change and are especially vulnerable to heat events.
5. City of Hayward residents suffer from asthma and other health conditions associated with poor indoor and outdoor air quality exacerbated by the combustion of natural gas ~~greenhouse gas emissions of San Francisco Bay.~~
6. Structures in Hayward are located along or near the Hayward fault, which is likely to produce a large earthquake in the Bay Area ~~Both of these faults are considered major Northern California earthquake faults which may experience rupture at any time. Thus, because the City is within a seismic area.~~

7. Local conditions have a definite impact upon buildings in Hayward. Therefore, it is found to be reasonably necessary that the *2019 California Building Standards Code* be changed or modified to mitigate the effects of the above conditions.

SECTION 2. CEQA Finding.

The City Council finds that this Ordinance is not a project under the requirements of the California Environmental Quality Act, together with related State CEQA Guidelines (collectively, “CEQA”) because it has no potential for resulting in a physical change to the environment. In the event that this Ordinance is found to be a project under CEQA, it is subject to the CEQA exemption contained in CEQA Guidelines section 15061(b)(3) because it can be seen with certainty to have no possibility that the action approved may have a significant effect on the environment. CEQA applies only to actions which have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA. In this circumstance, the proposed action would have no or only a de minimis effect on the environment. The Ordinance is also exempt from CEQA under CEQA Guidelines section 15308, because it is a regulatory action for the protection of the environment. The foregoing determination is made by the City Council in its independent judgment.

SECTION 3. Determination of Cost Effectiveness.

Cost effectiveness studies was prepared for the Statewide Code and Standards Program titled “2019 Cost Effectiveness Study: Low-Rise Residential New Construction” and “2019 Nonresidential New Construction Reach Code Cost Effectiveness Study” (“Studies”). The Studies analyzed the feasibility and cost effectiveness of requiring new construction to be all-electric for 16 different climate zones in California, including climate zone 3, within which the City of Hayward is located. The Studies determined the efficiency standards in this ordinance will meet the Study’s cost-effectiveness requirements in climate zone 3. Based on this, the City Council of the City of Hayward hereby determines that the all-electric measures being adopted by the City are cost effective as documented in the Studies.

BE IT FURTHER RESOLVED that the City Clerk is hereby directed to cause a copy of this resolution, together with the modifications or changes to the 2019 California Building Code, to be filed with the California Energy Commission.

IN COUNCIL, HAYWARD, CALIFORNIA _____, 2020.

ADOPTED BY THE FOLLOWING VOTE:

AYES: COUNCIL MEMBERS:

MAYOR PRO TEMPORE:

NOES: COUNCIL MEMBERS:

ABSTAIN: COUNCIL MEMBERS:

ABSENT: COUNCIL MEMBERS:

MAYOR: _____

ATTEST: _____

City Clerk of the City of Hayward

APPROVED AS TO FORM:

City Attorney of the City of Hayward

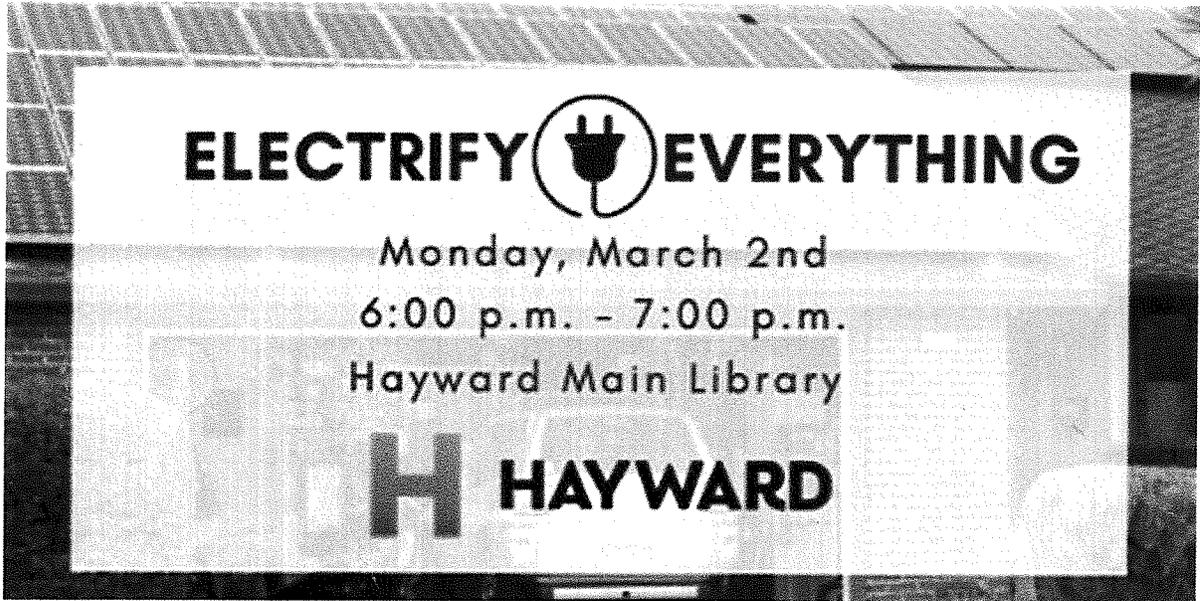
ITEM #5 LB 20-002

**ELECTRIFICATION REACH CODES: ADOPT A
RESOLUTION AND INTRODUCE AN ORDINANCE
TO ADOPT ELECTRIFICATION REACH CODES
FOR THE 2019 CALIFORNIA ENERGY CODE AND
CALIFORNIA GREEN BUILDING STANDARDS
CODE**

Public Comment Charlie Peters

eventbrite

Order #1282655463



Electrify Everything Workshop

General Admission

Hayward Main Library, 888 C Street, Hayward, CA 94541 Monday, March 2, 2020 from 6:00 PM to 7:00 PM (PST)

Free Order

Order Information

Order #1282655463. Ordered by Charlie Peters on February 29, 2020 2:41 PM

Name

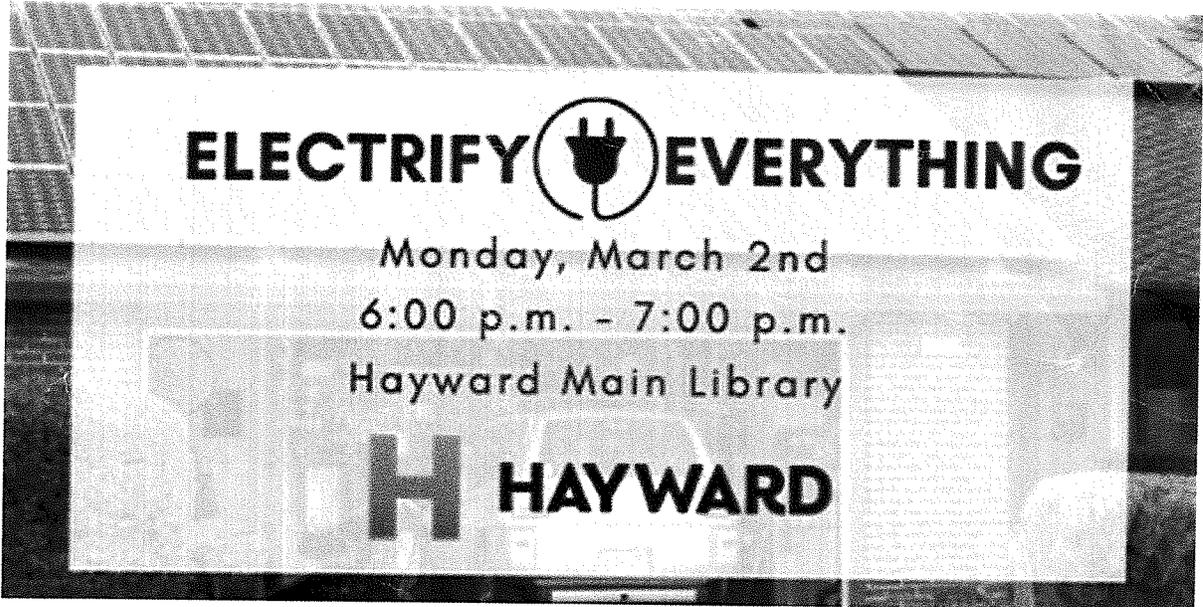
Charlie Peters



12826554631788766495001

CAPP contact: Charlie Peters (510) 537-1796 cappcharlie@earthlink.net

eventbrite
Order #1282655463



Electrify Everything Workshop

General Admission

Hayward Main Library, 888 C Street, Hayward, CA 94541 Monday, March 2, 2020 from 6:00 PM to 7:00 PM (PST)

Free Order

Order Information

Order #1282655463. Ordered by Charlie Peters on February 29, 2020 2:41 PM

Name

Charlie Peters



12826554631788766495001

Big Oil Explores Adding More Cheap Ethanol to Gasoline in Iowa

Jeffrey Bair & Michael Hirtzer / Finance Yahoo / Feb. 19, 2020

(Bloomberg) -- BP Plc and Royal Dutch Shell Plc are exploring adding more ethanol in gasoline in top corn state Iowa to take advantage of how cheap the biofuel has become.

The oil majors are gauging driver interest at a small number of stations in 15% ethanol blends, up from the current state standard of 10%, after the Trump administration in May allowed an increase nationwide.

Adding more ethanol to gasoline may help Midwest farmers who have been struggling to find markets for corn after biofuels demand plateaued last year. Ethanol futures slumped to the lowest in more than a decade in 2019, making it unprofitable to make the biofuel that accounts for about a third of demand for the U.S. corn crop. But cheap ethanol won't save drivers much money: At current prices, filling up a Ford-F150 would only cost about a quarter less.

The BP-branded Elliott Oil Co. has for about two weeks been selling some E15 in the small town of Osceola, CEO Andrew Woodard said. BP spokesman Michael Abendhoff said the company does not comment on marketing strategy.

John Reese, downstream policy and advocacy manager in the Americas for Shell, said at the National Ethanol Conference in Houston that Shell offers higher ethanol blends, without offering specifics.

Shell spokesman Ray Fisher said the company is working to add E15 in Iowa, Indiana and Illinois. "Prior to implementing E15, there is due diligence to ensure we can deliver a quality product and meet state regulations."

Benchmark Chicago cash ethanol traded at a one-year low in January, with the price decline generating interest in adding more to the mix. But that's less than a penny per gallon below pump prices.

Efforts to boost ethanol have an edge because the U.S. is sending only trace amounts of it to China, and Mexico is trending toward using less corn-based fuel, Corey Lavinsky, ethanol analyst at S&P Global Platts, said by email.

There is also some political support. Iowa's governor included an E15 tax credit extension and expansion in the state's budget proposal.

Iowa drivers like E15, and retailers have noticed, said Monte Shaw, executive director of the Iowa Renewable Fuels Association in West Des Moines, by telephone.

"It's happening because enough independents in Iowa, they know there's no stigma, that Iowans will buy this stuff," Shaw said.

<https://finance.yahoo.com/news/big-oil-explores-adding-more-203311585.html>

Iowa Renewable Fuels Association-Nancy Pelosi-Donald Trump-Mike Bloomberg-Shell Oil-The Queen, Fuel Ethanol Partners?

***CA Fuel Ethanol Waiver for \$2
Fuel, FED OZONE Standard
Compliance, Road Repair Funds,
(Clean Air & Clean Water)***

CAPP contact: Charlie Peters (510) 537-1796 cappcharlie@earthlink.net



BUSINESS, CONSUMER SERVICES, AND HOUSING AGENCY • GAVIN NEWSOM, GOVERNOR

Executive Office
1625 North Market Blvd., Suite S-308, Sacramento, CA 95834
P (916) 574-8200 F (916) 574-8613 | www.dca.ca.gov



February 18, 2020

Nikki Ayers
Treasurer
California Automotive Business Coalition
P.O. Box 254456
Sacramento, CA 95865

Dear Ms. Ayers:

Thank you so much for your letter following our meeting on January 23, 2020. I appreciated the opportunity to meet with you and California Automotive Business Coalition (CalABC) president Bud Rice and Charlie Peters with Clean Air Performance Professionals (CAPP) to discuss issues of interest to the automotive repair industry and California consumers. Let me take this occasion to address the concerns shared in our meeting that also included Patrick Dorais, Chief of the Bureau of Automotive Repair (BAR).

First, I want to assure you that my expectation is that all changes brought to BAR's attention be given due consideration and discussed openly, with an opportunity to provide feedback, before their implementation. From my discussions with Mr. Dorais I believe he has created a collaborative platform to work with all stakeholders and provide transparency to the work that goes on at BAR. This is evidenced, as I am sure you would agree, through regular dialogue on BAR policies and programs at quarterly meetings of the BAR Advisory Group, of which you are a member. In addition, he has been very open to meeting with stakeholders to identify areas of improvement for California consumers.

It is my understanding that BAR has invested a significant amount of time investigating and implementing changes proposed by Mr. Peters over the last several years. Mr. Peters' suggestion for BAR to help raise consumer awareness of Partial Zero Emissions Vehicle (PZEV) warranties resulted in a change to the Vehicle Inspection Report (VIR) produced and provided to consumers with every failing Smog Check. Mr. Peters and Mr. Rice were both involved in the development of the language that was added to the VIR. Concurrently, a study with the California Air Resource Board (CARB) was conducted by the BAR Referee to determine whether it was possible to identify vehicles covered under a PZEV warranty so that consumers could be provided more

targeted and effective information about their vehicle following a Smog Check. The extensive study concluded that this information will require each licensed Smog Check inspector to collect and record "Test Group" during the Smog Check, as the Vehicle Identification Number (VIN) does not provide PZEV-specific information. As a result, BAR is currently developing a change to the inspection procedure to allow for this to happen. These concerted changes are very important to BAR's mission and it is very appreciative of the input provided.

Mr. Peters' other proposed change is to notify a technician through the inspection software, upon a vehicle passing a Smog Check, that the vehicle failed its last Smog Check, presumably in the same inspection cycle. BAR has already made the entire test history of every vehicle registered in California available to anyone – including Smog Check inspectors and repair technicians – through BAR's website. Mr. Peters' proposal would require a software change by equipment manufacturers to the BAR-97 Emissions Inspection System (EIS), which is required to inspect pre-2000 model-year vehicles; as such, it would likely cost the industry several million dollars to implement. Further, BAR does not believe that this proposed change will result in any measurable benefit to the program and could encourage technicians to focus on performing faster and more haphazard inspections instead of quality inspections. Lastly, such a proposal is unnecessary because it would have the same effect as BAR's STAR Program, which includes several performance metrics to change technician inspection behavior and encourage quality inspections on all vehicles, regardless of their inspection history.

During our meeting, Mr. Rice shared legitimate concerns regarding the education and training of service advisors in the industry. BAR's *Write It Right* is a BAR publication to help automotive repair dealers comply with certain documentation and consumer authorization requirements of the Automotive Repair Act. In 2019, BAR updated (and distributed) this guide based on recent legislative and regulatory updates to key provisions of the Act and its regulations. BAR already provides in-person training presentations on *Write It Right* in response to a voluntary request from a station, or as recommended by BAR to educate a station on compliance issues identified during a BAR field office's mediation of a consumer complaint(s). While BAR believes there is no substitute for an in-person *Write it Right* presentation that allows for a two-way dialogue, BAR is currently working to develop an online training program for the *Write It Right* guide and will coordinate with the Department of Consumer Affairs (Department) on any assistance needed. As discussed during the meeting, education of both consumers and the licensees is very important to the Department and I look forward to working with all stakeholders to continue to find those education opportunities.

Nikki Ayers
February 18, 2020
Page 3

Lastly, as you pointed out, legislation signed into law by Governor Brown exempts new vehicles from the Smog Check Program for eight years (AB 1274, O'Donnell, Chapter 633, Statutes of 2017). I agree that the potential impact to consumer protection is concerning as many vehicle warranties expire during the 7th and 8th years, which potentially leaves many consumers responsible for repairs that would have previously been the responsibility of the vehicle manufacturer. It is my understanding that this concern was raised by numerous stakeholders, including the automotive repair industry, prior to this legislation being signed. In response, it appears that the legislation provides a mechanism to bring excepted vehicles back into the biennial inspection program if it is determined that there is a substantial probability that a vehicle has a tampered emission control system or would otherwise fail a smog check test. In July 2019, CARB provided an analysis to the BAR Advisory Group of BAR roadside data, which provided additional insight on this issue. BAR is currently gathering additional data and working with CARB to better quantify the impact of this legislation and will explore ways to mitigate its impacts on consumers and air quality. BAR plans to provide an update on this effort at the April 2020 meeting of the advisory group and looks forward to your and industry representatives' participation in that discussion.

Thank you for your interest in these issues and for the important role you play in facilitating their discussion before the advisory group and industry forums such as CalABC. I look forward to BAR's ongoing efforts to work with you and other industry leaders on these policy matters. If you have any additional questions, please feel free to let us know.

Sincerely,



KIMBERLY KIRCHMEYER
Director

cc: Bud Rice, CalABC President
Johan Gallo, CalABC Executive Director
Charlie Peters, CAPP
Patrick Dorais, BAR Chief



Clean Air Performance Professionals

January 23, 2020 / 3:00 PM
Department of Consumer Affairs
Director Kimberly Kirchmeyer
1-916-574-8200 / fax: 8613

Health and Safety Article 6, Public information program 44070

Good afternoon Ms. Kirchmeyer.

Congratulations for the Appointment to serve the Governor in such a big way.

DCA/BAR Engineering is considering an interesting addition of the car emissions label information in the Smog Check test data.

Also the addition of a flag to notice of a previous test fail result at another location in the previous 60 days.

Thank you for your interest in this consumer information program.

Clean Air Performance Professionals, an award winning coalition of motorists.

Charlie Peters

1-510-537-1796

cc: Interested parties

CAPP contact: Charlie Peters (510) 537-1796 cappcharlie@earthlink.net

Former FBI Cyber Official Trent Teyema Named Parsons CTO
By Carey Smith / Washington Exec / November 17, 2019

Parsons Corp. announced it has tapped veteran cybersecurity expert Trent Teyema as chief technology officer for its federal business.

Teyema will also serve as a senior vice president, and will oversee intellectual property protection, and research and development initiatives, among other duties.

Teyema, who has more than 20 years of experience in the cybersecurity field, most recently served as chief operating officer and chief of cyber readiness for the FBI. He also held appointed roles in the White House.

“Trent has proven experience in managing some of our country’s most complex and high-risk national security challenges,” said Carey Smith, president of Parsons’ federal business. “We look forward to working with him to expand Parsons’ technology solutions portfolio as it grows in scope and diversity.”

Teyema has a master’s degree in forensic science from George Washington University.

<https://washingtonexec.com/2018/09/parsons-trent-teyema-cto/#.XdHJSr-IaRt>

VW-Shell Oil-Parsons Corp, Self Driving Public Private Partners?

CAPP contact: Charlie Peters (510) 537-1796 cappcharlie@earthlink.net

Not So Fast

By Erik Neumann / California Magazine / February 4, 2015

Eight years ago, UC Berkeley struck a historic but controversial deal with the British oil company BP: Berkeley would benefit from the oil giant spending \$350 million to create a new Energy Biosciences Institute on its campus, and BP would reap the benefits of that institute's research into biofuels.

Now, with almost \$100 million still unspent, the road to cleaner biofuels has just hit a big speed bump.

BP is exercising its contract option to pull nearly a third of its funding for 2015, and more in the remaining two years. At Berkeley, that means ending some key research, the early elimination of up to 20 current post-doctorate positions, the layoff of more than half the support staff—and a search for other energy companies to fund its biofuel research.* The decision is a troubling setback for biofuels, which advocates are pursuing as a promising alternative to climate-harming fossil fuels, but which skeptics have long regarded as a dubious investment.

The explanation for BP's change of heart: plunging oil prices, not to mention what BP will have to pay for the mounting costs of the company's disastrous 2010 oil spill in the Gulf of Mexico. Yes, in a rather ironic twist of fate, the largest oil spill in history and the current bargain-basement prices for oil are taking a toll on the development of cleaner, renewable biofuels.

Since the Energy Biosciences Institute was started in 2007, the partnership between BP, Berkeley, the University of Illinois at Urbana-Champaign and the Lawrence Berkeley National Lab focused on two main areas of biofuel research. Institute director Chris Somerville sums up the goals: Figuring out which plants are optimal to use in the formulation of biofuels, and figuring out what kinds of fuels to make them into.

Today's biofuels often are made from corn, sugarcane juice or wood pellets, but newer biofuel research has focused on algae, seaweed, grasses and waste byproducts such as corn cobs and fibrous cane stalks.

Weeks ago, after the Berkeley-based institute said it was poised to shift more from the basic science research phase into actual engineering, it learned that it would lose \$10 million in BP funding in 2015, and unknown amounts in the next two years—forcing it to pull the plug on some of its work.

“In science funding, nothing lasts forever,” Somerville says. “Even with a big company with lots of resources, we could not get it to the point where it was a slam dunk to commercialize it.”

BP’s decision targets one area of research in particular—lignocellulosic (LC) biofuel technology—which aims to convert plants’ biomass into fuel. In fact, BP announced a company-wide policy to shift away from research in LC fuels, while consolidating its efforts to “build on the profitability and scale” of its existing sugarcane biofuels business in Brazil.

“While we believe there is good value in the LC technology, the current challenging external business environment is resulting in tough strategic choices having to be made by businesses across BP,” company spokesman Jason Ryan said via email. He went on to acknowledge that the company’s decision to stop investing in LC ethanol technology development “has had an impact on the viability of the Energy Biosciences Institute’s research portfolio,” but added “BP values the remaining parts of (the institute’s work), as well as the nature of our collaborations, and is in discussions with our university partners to create the right framework for the future.”

BP’s cuts to the institute come as the oil giant has laid off hundreds of employees and enacted wage freezes in response to the global free fall in oil prices. Since June 2014, prices have dropped by more than half as production in the United States and abroad continues to increase. BP is also before a federal court in New Orleans to determine how much the company must pay for the 2010 Deepwater Horizon oil spill, which sent more than 3 million barrels of oil gushing into the Gulf of Mexico. BP faces a maximum fine of \$13.7 billion.

“All renewables are going to have to weather the storm,” Somerville says, speculating as to when enthusiasm for biofuels will rebound. “We may have to wait it out until oil gets expensive again.”

Prices aside, skepticism about the viability of commercial biofuels persists. A new report from the World Resources Institute, an environmental think tank, claims that the benefits of biofuels have been dramatically exaggerated. Instead the report found that the large amount of plant-based materials needed to make biofuels would consume valuable agricultural land that would be put to better use growing crops to feed the planet’s surging population.

“Even assuming large increases in efficiency, the quest for bioenergy at a meaningful scale is both unrealistic and unsustainable,” the report states. It goes on to suggest that other renewables would better meet the world’s energy needs with fewer greenhouse gas emissions—and without conflicting with global food security.

It also did acknowledge that certain biofuels could be worthwhile, particularly those made from plant waste, but that even their potential is limited.

But others take issue with the suggestion that cellulosic fuels are not commercially viable. “In fact there were five commercial-scale plants brought on-line in the past year,” notes Heather Youngs, a senior fellow at the Berkeley-based institute. “It was 136 years between invention of the solar cell and the first commercial solar panel. It took another 30 years to drop the price from \$77 per watt to under \$1 per watt. Compared to that timeline, cellulosic fuels are ahead of the curve.

“We should not give up on the goal just because one company is have unrelated financial woes and has decided to scale back their entire research program.”

Somerville says that while the Berkeley institute’s work of converting plants to fuel has now stopped, it’s continuing other bio-research, including converting sugar into diesel and jet fuel, breeding yeast for ethanol production from sugar cane, and developing renewable lubricants. And in the meantime it’s looking for other funders to replace BP, which Somerville says includes “all the big companies in renewable liquid fuels and chemicals.”

The Energy Biosciences Institute on the Berkeley campus

From the beginning, the partnership between a historically liberal university and a multinational oil company stirred student protests and criticism from some in the media and other professors. Among them was associate professor of ecology Ignacio Chapela, who “forced the discussion” about what it means for a company like BP to be a major funder at Berkeley. The supposed justification for the relationship, he noted, was that it was “the only way forward to have a stable source of revenue” for research into biofuels.

“When they opened the building, I wanted to see (inside) and I couldn’t pass the front desk,” Chapela says. The institute is one of the few buildings on the Berkeley campus besides the U.S. Department of Energy-supported Lawrence Berkeley National Lab that isn’t readily accessible to the general public. Anyone who wants to visit or tour the building needs to make an appointment, Youngs says, adding that the institute last year hosted several hundred visitors from around the world.

“I continue to be really upset and sad that we create these areas of private domain,” Chapela says, “ruling over our public interest and our public agenda.”

The research agreement between BP and Berkeley included a clause that allowed the contract to be broken with six-months notice. Somerville says the advanced notice allowed the institute to create a “gentle phase-out” so that graduate students’ work will be finished and post-doctorate researchers’ work will be eliminated in the coming months. Although more graduate student and post-doc research positions that BP was anticipated to fund in the next two years will now be lost unless the institute secures replacement funding, no one at the institute could say how many. In addition, 13 of 21 support staff are losing their jobs.

“Estimates of how large the contribution of bioenergy could be are inherently uncertain,” Somerville and Youngs recently wrote. “What is certain is that large amounts of unused biomass are available today that can contribute substantially toward creating employment, reinvigorating rural economies, and achieving energy and climate security.” But they also acknowledged plenty of scientific and engineering challenges.

“The 50-year slog toward the recent historic achievement in commercial-scale lignocellulosic biofuel production is an example of how hard some problems in the field are.”

Nonetheless, they added, “Since plant biomass is likely to be the main source of renewable fixed carbon far into the future, anything

<https://alumni.berkeley.edu/california-magazine/just-in/2015-02-20/not-so-fast-uc-berkeley-biofuel-research-takes-hit-bp-oil>

<http://www.foxbusiness.com/features/2017/03/05/german-chancellor-angela-merkel-to-testify-on-volkswagen-emissions-scandal.html>

EPA-VW-Shell Oil- Parsons Corp, “New World Order”?

CAPP contact: Charlie Peters (510) 537-1796 cappcharlie@earthlink.net

Shell and BP Halt Opposition to Renewable Fuel Standard

By RP Siegel / Triple Pundit / Tuesday, August 6th, 2013



The reason why is pretty clear. Right now, 10 percent of what would have been gasoline sales is now being diverted to biofuels, primarily ethanol. Oilmen particularly don't like the renewable fuel standard (RFS), which legally requires that gasoline producers include a minimum percentage of ethanol in every gallon sold, an amount that could grow to 15 percent in the near future, and eventually might go as high as 30 percent. By 2022, that means that 36 billion gallons will come from bio-based sources, though a maximum of 15 billion gallons can come from corn, a move intended to limit interference with the food supply.

That is why, both the American Petroleum Institute and the American Fuel and Petrochemical Manufacturers

group are pushing hard for a complete repeal of the RFS.

Two oil companies, BP & Shell, however, have broken ranks with these trade groups,

saying that they, "generally support" the legislation. Those are the words of John Reese, Shell's downstream policy and advocacy manager. He does feel that the mandate could use some revision. Likewise, according to spokesman Matt Hartwig, "BP supports the goals of the RFS program to stimulate the development and deployment of biofuels technologies. There are challenges with the standard that must be addressed, and we continue to work with regulatory authorities to address these issues."

This stands in fairly stark contrast with ExxonMobil, for example, whose VP of public and government affairs, Ken Cohen, said that “the RFS is broken beyond repair.” Cohen made this comment in a blog post in which he complained that the price of a Renewable Identification Number (RIN), a credit used to track each unit of renewable fuel, has been climbing rapidly due to a shortage of supply.

These comments were made at a two-day congressional policy briefing on the RFS, held last month by the House Committee on Energy and Commerce. Committee chairs Henry Waxman and Fred Upton issued the following statement.

We began this year with an understanding that the time had come for a review of the RFS and a belief that bipartisanship was our best path forward. We have spent the past four months conducting careful analysis, soliciting stakeholder feedback, and listening to expert testimony. The process has been a success, giving both members and the public an opportunity to better understand a policy that is both complex and far-reaching.

“We are going to use the August work period to discuss bipartisan solutions that take into account the broad range of concerns we have heard. Any reforms to the RFS will reflect our efforts to protect the interests of consumers, the environment, farmers, food and energy producers, and all of the American people. Building consensus will not be an easy task, and we are grateful for the members on both sides of the aisle who have stepped up to provide leadership

<http://www.triplepundit.com/2013/08/shell-bp-halt-opposition-renewable-fuel-standard/>

on this important issue. We will continue looking to them, along with other members from both parties, both on and off the Committee, to ensure the wide range of perspectives are taken into account. As we transition from reviewing the law to reforming it, our commitment to a collaborative, bipartisan process is stronger than ever.”

So, why the difference in opinion? It could be that both BP and Shell have invested heavily in biofuels. Shell has a partnership with Virent, aimed at developing biofuels in Houston while BP and DuPont have a joint project called Butamax Advanced Biofuels.

Virent produces a full spectrum of plant-based petroleum substitutes, including many petro-chemicals. They can process a variety of feedstocks ranging from conventional plant sugars such as beet, sugar cane, and corn, to cellulosic sources such as corn stover, grasses and wood.

Butamax produces bio-butanol, a fuel that boasts a higher energy density than ethanol. It is also approved for blending at higher ratios than ethanol, (16 percent vs. 10 percent).

Several fast food companies including White Castle and Wendy’s lobbied against the RFS, complaining that the standard would drive up food prices.

Many biofuel proponents claim that the RFS is essential to advance development of second-generation cellulosic biofuels which will provide far better energy yields with lower impact, compared with ethanol produced from co

CAPP contact: Charlie Peters (510) 537-1796 cappcharlie@earthlink.net

AG Kamala Harris ... Can we have cleaner air, water & \$2 gas?

By Stella / Hemmings Motor News / March 2001 & July 2000

(March 2001) - ... "Rep. Gary A. Condit (D-Calif.) has introduced legislation, in the opening days of the 107th Congress, to help drive gasoline prices down while protecting the environment. HR 52 seeks to relieve California from federally mandated year-round gasoline oxygenate requirements while preserving the full benefits of California's reformulated gasoline program. Condit introduced the bipartisan legislation with another member of the California delegation, Rep. Chris Cox. 'California already meets Environmental Protection Agency requirements for reducing emissions of toxic air pollutants and ozone-forming compounds,' Condit said. 'When a state meets these requirements, under this legislation, they would not be required to add oxygenates to gasoline'." ...

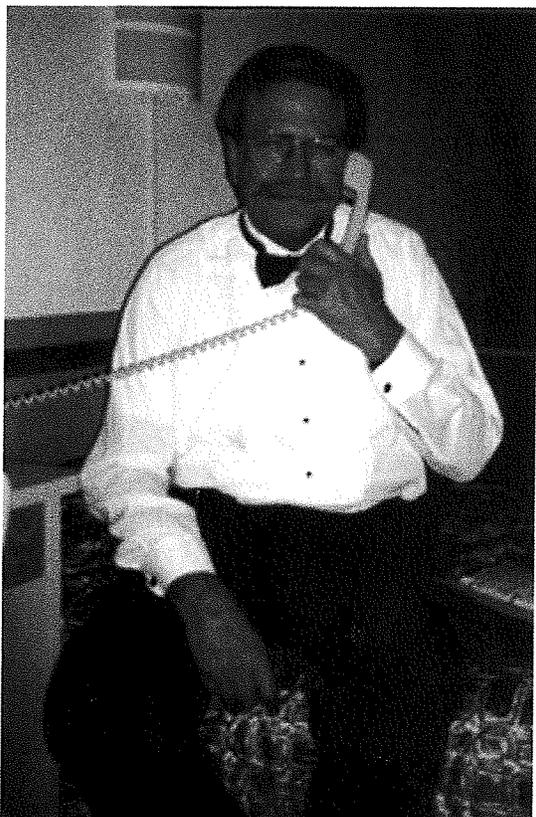
<http://clubs.hemmings.com.clubsites/capp/mar01.html>

(July 2000) - ... "Unlike MTBE, little is known about the impacts of ethanol releases into groundwater or the environment. However, because ethanol is the primary ingredient of beverage alcohol, which is classified by the California Proposition 65 Committee and other cancer experts as a human carcinogen, many are concerned about the possibility that ethanol may pose a cancer risk. Additionally, independent researchers have determined that ethanol in groundwater can extend plumes of other more potent gasoline carcinogens (benzene, toluene, etc.) up to 25%. In addition, ethanol is less effective than MTBE at fighting air pollution, and due to transportation and supply problems, will likely increase gasoline prices." ...

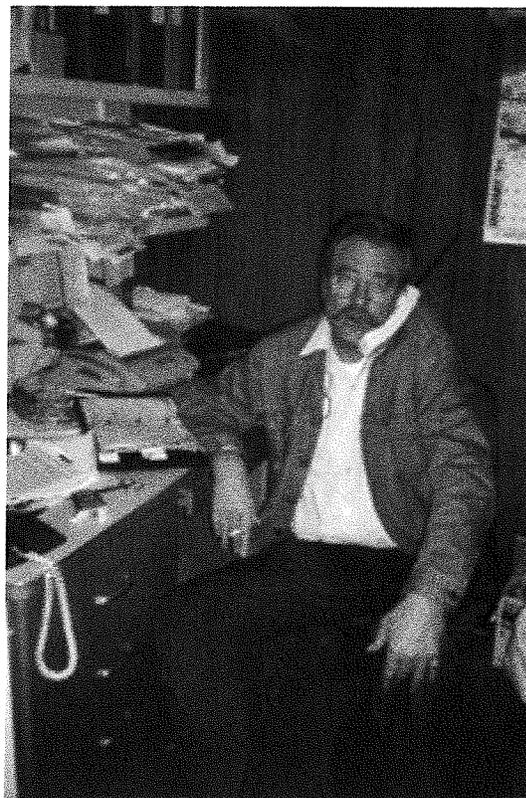
<http://clubs.hemmings.com/capp/july.html>

CAPP contact: Charlie Peters (510) 537-1796 cappcharlie@earthlink.net

Clean Air Performance Professionals



Charlie Peters -- CAPP's President



Always at Work!

Charlie & Stella



Stella in her '48 Packard Convertible Victoria

<http://clubs.hemmings.com/capp/photos.html>

CAPP contact: Charlie Peters (510) 537-1796 cappcharlie@earthlink.net

Warning lights went off early

By Dunstan McNichol / Hy. Greenspun / January 23, 2000

The press conference was called in a hurry. Gov. Christie Whitman told the reporters gathered in her outer office that she would not rest until she found out how New Jersey's new auto emissions inspection system became such a colossal failure despite warnings along the way.

"If I had known for one second that there were these concerns out there, I would have pulled the plug," she declared on Thursday. But an extensive review of the program's history shows that those conducting the post-mortem won't have far to look. Before and after a \$400 million contract was awarded to Parsons Infrastructure and Technology Group to bring home a project that was seriously flawed from the start, plenty of warning lights were blinking.

The signs of trouble were there from the beginning, when the state drew up a request for bids to develop and operate an emissions system, a request that contained such rigid deadlines and unrealistic expectations that all the potential bidders except Parsons Infrastructure backed off.

Then, state officials in a number of departments ignored a consultant's repeated and increasingly strident warnings that the state's 5 million motorists were about to be subjected to horrendous delays and screw-ups. Among those who received the warnings was the state official in charge of the inspection contract.

The consultant, a company hired to monitor Parsons' handling of the project, was right. Seventeen months after the Parsons contract was signed in August of 1998, the state has an auto emissions inspection system that was poorly planned and developed with little true oversight.

Motorists going to get their autos inspected have found they had to wait in line for four or more hours. They have had to get out of their cars to stand around in the cold because no waiting rooms were built. Equipment has failed -- shredding tires, declaring brakes faulty when they are not, and refusing to read crucial data such as vehicle identification numbers. Since the system was launched Dec. 13, as many as

half of the 106 inspection lanes at 32 state facilities have been shut down on some days.

Instead of a high-tech solution to a nagging problem, the state's emissions testing program has become a monument to communications breakdowns, slipped deadlines and misgivings chronically ignored. The following account of the auto inspection mess is based on a review of hundreds of state documents, including consultant's memos and e-mail messages, and interviews of dozens of people connected with the project, from men and women working the equipment in the inspection lanes to state officials and company executives. The quest for a new auto emissions inspection program began in 1990, when the federal government amended the Clean Air Act and ordered sweeping measures to clean up air pollution. New Jersey, possessor of the nation's dirtiest air, was put on notice that it would have to develop a tough new system for controlling auto emissions. For years, New Jersey's emissions testing system consisted mainly of an analysis of tailpipe emissions of cars as they idled at 32 state-run DMV stations and at 3,500 private garages. The test was free at state-run stations and, as of last year, cost \$25 at licensed private garages.

But the new federal guidelines aimed to test cars under conditions that simulated actual driving conditions. The new tests were to use a machine called the dynamometer -- a pair of rollers embedded in the testing center's floor that allow a car to run without moving, like a jogger on a treadmill.

In its original Clean Air Act regulations, published in 1992, the Environmental Protection Agency insisted that states use a dynamometer that spun wheels at 50 mph for four minutes. Faced with accidents and long delays at testing stations that led to motorist revolts in Colorado and Texas, the EPA in 1995 let New Jersey and other states opt for a dynamometer test of 50 seconds, with wheel speeds of only 15 mph.

And the EPA, impatient with a series of state delays, initially gave New Jersey until 1997 to change to the new testing system. Testing companies, attracted by a potential contract worth hundreds of millions of dollars, began lining up New Jersey lobbyists and financing local political campaigns to help get a piece of the action.

But when the bids came due in 1997, only one company, a tiny outfit based in Israel with no U.S. emissions testing experience, made a pitch for the work.

Envirotest and Keating Technologies, among the leading auto inspection companies that backed away from the first deal, say now they found the bid specifications too complicated and unwieldy. The Israeli firm's offer was declined, but by then the state had lost time. With only two years remaining before expensive federal sanctions kicked in for not meeting the clean-air deadline, the state had to draw up a new set of bids and persuade a contractor to set up the new system in record time.

Following a conference with prospective bidders in late 1997, the state made several changes in its bid proposal. It also added a rigid set of performance deadlines designed to put the new program on line by Dec. 13, 1999. In the problem-plagued months to come, this deadline became nearly Holy Writ in the minds of nervous officials: Unless it was met, they feared, as much as \$1 billion in federal highway funds could be lost.

At least 300 private garages, for instance, would have to be hooked into a new computer system by Oct. 1, 1998 -- just 90 days after the date for winning the bid, the proposal said. And the successful bidder had to commit to a preliminary deadline by which it would have at least one-third of the new inspection system ready to begin offering the new emissions test.

A contractor who missed a deadline, bid documents warned, would be fined \$33,334 a day until it was met.

"These time periods will become critical benchmarks," the state bidding documents say. "And will, among other things, serve as the trigger mechanism for initiating payments and assessing liquidated damages, if applicable."

For most of the testing firms considering the state contract, those rigid deadlines were too tough to accept.

"That was a real killer, I think, for a lot of people," said Dan Stone, president of Testcom Inc., one of the nine firms that considered but did not bid on the state's inspection contract. "Had we sensed there was some flexibility in schedules and a less punitive approach to penalties, yeah, it might have changed our perception regarding bidding or not bidding."

A spokesman for Keating Technologies said the state's hard stance on the proposed deadlines had discouraged the company from submitting a bid.

During pre-bid conferences, state records show, Keating unsuccessfully sought a three-month extension on the Oct. 1 deadline for the computer hookup. Keating also asked whether a firm would face the \$33,334 per-day fine for failing to complete just one of the 36 inspection lanes required months before the Dec. 13 deadlines, and was told in writing, "Yes."

"I think, had the deadlines been different at that time, we might have considered bidding it a little more seriously," said Chris Stock, a spokesman for Keating, which operates testing programs in Rhode Island and Massachusetts. "Our principal concern was the time frames to do the job, and the other work we had."

Stanley Rosenblum, a former state transportation officer who helped develop the bid, known as a "request for proposal," denied that the deadlines scared away companies.

"I reject the concept that our RFP drove prospective bidders out of the system," he said earlier this month. "Those dates were being driven by the reality that we had to get a program in place." But a consultant hired to serve as watchdog over Parsons had warned the Treasury Department its bidding standards were too tough. "We have identified the following two major concerns that we believe may discourage the most qualified and responsible firms from submitting bids," Sierra Research Corp. of Sacramento, Calif., said in a memo written Nov. 12, 1997 -- four months before the RFP was published. Sierra cited uncertain estimates of inspection volume and "an unrealistic implementation schedule that severely jeopardizes a successful program start-up."

Sierra is a subcontractor of Parsons Brinckerhoff, a Princeton consulting company that has a state contract to oversee the testing system. Parsons Brinckerhoff and Parsons Infrastructure are unrelated companies.

The 1997 memo from Sierra was prophetic. Parsons Infrastructure was the only firm to bid for the state's inspection program. And it was far from a reluctant bidder.

New Jersey's massive car inspection contract, which accommodates more than 5 million vehicles and can generate more than \$50 million in annual fees, has long been a coveted prize. Since 1992, firms that run such systems have sought a foothold in New Jersey. Between 1994 and 1996, state records show, three testing firms paid New Jersey lobbyists a total of \$173,085. Envirotest, the nation's largest

private inspection company, paid \$116,650 to two key Trenton lobbyists: Hazel Gluck, who had co-chaired Whitman's 1993 gubernatorial campaign, and Dale Florio, chairman of the Somerset County Republican Committee.

When the state's first bid proposal drew little interest, Parsons Infrastructure entered the game. It entered late but it played hard. The Pasadena, Calif., company, a subsidiary of Parsons Corp., had engineered such massive projects as the Alaska Pipeline and the tunnel beneath the English Channel. It began laying the groundwork for a run at New Jersey's contract.

The firm hired Frank Holman, former chairman of the Republican State Committee, to keep it apprised of developments in the emissions contract.

Parsons Infrastructure recruited Carl Golden, a former spokesman for Whitman and another paid consultant to the Republican State Committee, to help develop its testing bid. And the firm retained Roger Bodman, a former state transportation commissioner and one of Trenton's top GOP lobbyists, to work on its behalf.

Parsons Infrastructure also poured \$141,800 into New Jersey Republican Party campaign chests during 1997 and 1998, state records show.

Its bid for the inspection contract, delivered in Trenton on June 12, 1998, contained names familiar to most state officials.

Golden was named the program's "public information and education administrator," and the advertising firm where he worked was awarded a \$15 million contract. Anthony Sartor, an engineer who is a personal and business associate of Senate President Donald DiFrancesco (R-Union), was assigned a \$3 million engineering subcontract under the Parsons bid.

Lawmakers, including DiFrancesco, raised objections. They complained the Parsons bid was costly, and, with a minimum of \$50 million a year in operating costs, far more expensive than the old state-run system. State union leaders, who opposed privatization of the central inspection stations, contended they could run the system for \$11 million less than Parsons proposed, or a savings of \$77 million over the life of the contract.

After a three-hour Senate hearing, at which then-state Treasurer James DiEleuterio defended the Parsons Infrastructure deal, the state signed the seven-year pact on Aug. 7, 1998.

"By any measurement, Parsons' qualifications and its experience are quite impressive," DiEleuterio said.

Golden scoffs at any suggestion that he was hired to help Parsons Infrastructure get an inside track on the contract. Neither Sartor or Bodman has returned phone calls, and Holman says he played little role in Parsons getting the contract.

The seven-year deal with Parsons was originally projected to cost a total of \$392 million, state contract records show: \$63 million for overhauling the inspection system and installing new equipment and \$329 million to run it for seven years.

During its first year under the contract, however, the firm has received \$103 million. That total includes \$43 million for construction and equipment costs and about \$60 million in operating expenses.

The operating costs far exceed the \$34 million the state estimated for the first year, when Parsons was conducting the state's older tailpipe emissions test. The state originally projected that Parsons would be testing 1.7 million cars in the first year. But that projection proved to be low by 600,000 cars.

Using those inspection totals projected over the next six years, plus the expectation that the numbers of cars in the state will increase each year, the entire cost of the contract may well approach \$592 million.

It was not long after Parsons won the contract that it was allowed to miss the deadlines that were so emphatically stated in the state's specifications. Within a month of the deal, the state scrapped its Oct. 1 deadline, records show.

Parsons missed another critical deadline on July 11, 1999, when it failed to get its testing lanes ready to operate. The state did not penalize Parsons as it had warned potential bidders it would. Carl Passeri, the state Division of Motor Vehicles official in charge of the inspection contract, last year explained that the interim deadlines had been just "a goal," and said the Oct. 1 deadline was "an unrealistic date that was put out there in haste." Passeri has declined to comment on any Parsons matter for the past several weeks.

Parsons Infrastructure says the deadlines were postponed because the Department of Environmental Protection and other state agencies were late in defining what the system's computer programs needed to include.

Sierra Research, the watchdog consultant, noted that Parsons Infrastructure was failing to get required work done on time, and suggested that if the state continued to let deadlines slip, New Jersey would either miss the federal deadline or would force an incomplete, inadequate system on motorists.

To Sierra, the state was allowing Parsons to push it around. "It is also apparent that the state is being tested by PI&TG (Parsons Infrastructure), and the state is failing the test," Sierra warned in a Dec. 29, 1998, memo.

Parsons "is determining the extent to which it needs to be responsive to the state, and thus far the company is seeing that failure to follow through on commitments or resolve technical issues results in no adverse consequences."

That memo from Sierra, hired by consultant Parsons Brinckerhoff, was one of nearly 100 that the research company wrote over two years about the testing program's progress, or lack of it. The existence of the memos became public last week when The Star-Ledger asked to see them and the Governor declared she had become aware of them for the first time.

Golden said Parsons Infrastructure never saw the memos.

"This is an issue between Sierra and Parsons Brinckerhoff," said Golden. Parsons Infrastructure "was not privy to those communications."

Larry Sherwood, Parsons Infrastructure general manager in New Jersey, said Friday night of the memos, "I have yet to see them." He declined further comment, saying it was a Sierra and Parsons Brinckerhoff matter.

A spokesman for Parsons Brinckerhoff said executives there "carried out all of their responsibilities under the oversight contract." He said summary reports on how the project was faring were sent to Passeri on a regular basis.

The memos, released by Whitman at her Thursday news conference, paint a portrait of an government whose oversight functions were on the blink.

"I suspect there is plenty of culpability to go around on this one," the Governor said during the news conference, at which she announced Attorney General John Farmer Jr. would conduct an inquiry into why the warnings in the memos never reached her.

Even after Thursday's bombshell, the contents of the memos continued to embarrass her administration. Whitman and Transportation Commissioner James Weinstein initially said it appeared that no members of the administration had seen the memos.

But a Star-Ledger review of the documents released Thursday shows at least 10 officials in the state departments of Environmental Protection or Transportation -- ranging from Passeri, the DMV official in charge of the inspection contract, to David West, a high-ranking DEP official -- received memos, e-mail messages or reports from Sierra Research. Passeri received at least three memos. On Friday, the administration acknowledged that some of the memos were sent to the bureaucrats in charge of making sure the new inspection system debuted smoothly.

Weinstein, who said Thursday that he did not believe that Passeri or anyone in state government had received the Sierra memos, reversed himself. Passeri did receive a small number of Sierra memos, he said. "There were some Sierra documents in his files," Weinstein said. Weinstein has accepted ultimate responsibility for the mess. His lieutenant, DMV Director Richard Kamin, also said he had not read any Sierra memos until this weekend. He added that he and others were aware of the general areas of concern, in part because of DMV's own experience running a test inspection lane in Wayne and in part because software glitches and other problems had shown up at the start of other states' inspection programs.

"We were confident we could make it work" because dozens of people were laboring on the program, Kamin said.

Kamin declined to go into other aspects of the process, citing the pending attorney general's probe.

Another problem signaled early, and subsequently ignored, was manpower.

In a 1997 forecast of inspection needs, the state DMV said running a testing system with 106 lanes would require 957 employees. Parsons, by contract, proposed to operate 124 testing lanes with 530 workers. A chronic shortage of

inspectors has compounded the problems for motorists. For most of 1999, when Parsons was paid about \$54 million for administering the state's traditional inspection test, the firm had fewer than 400 workers in the testing centers.

When the new, more complicated, test debuted, the firm had 548 inspectors on hand, according to Golden. That is about the number promised in Parsons' bid for the work. Now Parsons is trying to hire 442 additional workers.

The additions will bring the staff to the level state experts long ago projected as needed to run an enhanced testing program. But the apparent miscalculation has meant continued short-staffing while Parsons spends weeks recruiting, training and certifying hundreds of new inspectors.

"It was always recognized by Parsons that if they did not have enough staffing they were responsible," Rosenblum said.

Adding to insult for motorists was the absence of sheltered waiting areas. With drivers spending upwards of 20 minutes outside their cars during the test, Whitman demanded to know what had happened to the sheltered, heated waiting rooms required by state law.

In fact, Treasury Department officials say, the requirement for the waiting rooms had been written out of the bidder's specifications, as part of a series of changes designed to keep the cost of the new inspection program down after the first failed bid effort in 1997. Instead, the bid required contractors to "make those repairs and modifications to the inspection facilities that are necessary to make them comfortable and convenient to customers." Under fire from Whitman and the public, Parsons Infrastructure this month began installing bus-stop-like shelters at the end of each inspection lane. There was more.

Computerized scanners designed to read coded information about a car's engine size, weight, age and other features from codes on state registration cards didn't work. Technicians resorted to punching in information by hand. But vehicle identification numbers are 17 digits long. Many of the VINs had to be punched and repunched because of manual errors.

On frequent occasions, once the car was identified, the computerized inspection equipment lost the information. The computer that was supposed to read a car's make or weight and transfer it to stations farther down the testing lane was sending

incorrect numbers. As a result, some cars were flunking brake tests they should have passed. Tires blew out on cars being tested on the dynamometer.

When temperatures dipped into the teens this month, Parsons Infrastructure found that much of the sensitive computer software and emissions testing devices installed in its testing lanes froze up. State records show the contract required that equipment be tested to a low temperature of only 40 degrees. Sherwood said Parsons Infrastructure was not concerned about cold weather disabling its machinery.

"We were told that the system was identical to Connecticut, so we really didn't worry about the freezing and temperature impacts," he said.

A memo from Sierra Research last January warned of potential problems in temperatures below 35 degrees.

Last week, Whitman conceded that warnings had gone unheeded.

"We're looking at a total system failure," Whitman said Thursday. "If I had thought for one second (such problems would be coming), I would have gone back to the EPA saying, 'You've got to give us more time.'" Parsons Infrastructure has no plans to ask the state to delay the program, Golden said, adding it is the administration's call on whether to halt it.

"We will do whatever are the rules and regulations imposed on us," he said.

Staff writers Brian Murray, Tom Johnson and Brian Donohue contributed to this report.

<http://www.nj.com/page1/ledger/e4993e.html>

<http://www.foxbusiness.com/features/2017/03/05/german-chancellor-angela-merkel-to-testify-on-volkswagen-emissions-scandal.html>

VW-Shell Oil-Parsons Corp, Partners?

CAPP contact: Charlie Peters (510) 537-1796 cappcharlie@earthlink.net

PUBLIC COMMENT

CHARLIE PETERS

Breathing Room

By Daniel Klein & Christina Saraceni / Reason / June 1994

Some people are easy to trust. When someone carefully explains what he means, listens to your doubts and confusions, and painstakingly meets every inquiry with a well-informed, evenhanded response, you can't help but trust him.

That's how it is talking to Douglas Lawson, a major contributor to the study of air pollution. Lawson is one of those earnest, "but-wait-there's-still-a-problem-here" type of guys. While he worked for the California Air Resources Board, the state's lead smog agency, he turned over stones—quite by accident at first—that others preferred left unturned. Then he scrupulously pursued his findings. Now he's at the center of a raging scientific debate, which in turn fuels a raging policy debate, which in turns fuels an ongoing public debate about the competence and integrity of the Environmental Protection Agency.

In California, the testing of automobile exhaust emissions—"smog check"—is decentralized. Thousands of private service stations perform emission inspections and offer to make any necessary repairs. Until recently, however, the EPA had been demanding that states centralize their smog-check programs by creating a small number of government-operated facilities California. This March, even after the EPA threatened to withhold federal highway money, California fended off the agency.

California's success is the start of a nationwide rebellion. Other states are already mustering nerve and repudiating centralized inspection. The battleground, however, goes far beyond smog-check issues. The science behind California's defiance also calls into question many related programs—such as alternative fuels, federally imposed engine-design standards, electric vehicles, and forced carpooling—that the EPA claims will reduce mobile-source smog problems. The real issue, then, is nothing less than the 1990 Clean Air Act and its enforcement by the EPA.

The EPA is at a crossroads. It can face up to the new findings by Lawson and others and take up new strategies for policing smog. But that's not an easy course of action for a massive organization that has invested tax dollars, political influence, professional expertise, and personal identities in the promotion of elaborate programs. The other option is to stay the course and put the screws to all insurgents. But then the EPA and

the Clinton administration will face rebellion on all sides and end up in court with reasonable people like Doug Lawson picking apart the agency on scientific grounds.

When Lawson first came to the California Air Resources Board in 1980, smog issues were relatively quiet. Researchers performed two basic tasks. First, they estimated the amount of each pollutant emitted into the air, basing the estimates—called "inventories"—on measurements of stationary and mobile sources. Then they theorized how pollutants mixed in the air to form smog gases such as ozone. For 20 years, the experts got their inventories and theoretical models to agree. Sensibly enough, the car-emission component of the mobile-source inventory was based partly on smog-check records. But since California smog checks are performed only once every two years on idling cars, they may not represent what moving automobiles actually emit the other 729 days of the biennium.

In 1987, Lawson was responsible for a study of real-life car emissions. The objective was to investigate not regulated pollutants such as carbon monoxide, hydrocarbons, and nitrogen oxides but unregulated gases such as benzene, formaldehyde, and other carcinogens. Lawson's group set up equipment that took readings of the pollutants in the open air that entered a tunnel in Van Nuys, California, and compared them to measures of the air exiting the tunnel after so many cars, for so many minutes, had contributed exhaust emissions to the composition. Unfortunately, the tunnel study failed in its main objective because the tunnel was too short to obtain accurate measurements of the unregulated pollutants.

But Lawson's group stumbled onto something it wasn't looking for: The regulated-gas readings were reliable but far out of line with expected levels. The cars in the tunnel emitted 300 percent to 700 percent more hydrocarbons than expected and 200 percent to 400 percent more carbon monoxide. Only the nitrogen oxide readings were even close to the model inventories, and even they were much higher than expected. Either something was wrong with the tunnel study or something was wrong with official estimates, and Lawson wanted to find out which. Flaws in the tunnel study would have produced systematic discrepancies. Instead, the tunnel readings for hydrocarbons, carbon monoxide, and nitrogen oxides departed from the expected results by vastly different factors, suggesting that something was drastically wrong with the official estimates of automobile-exhaust emissions.

The tunnel study introduced the first of three great challenges to smog policy: Mobile-source emissions have been greatly underestimated. As a result, too much of the pollution has been attributed to stationary sources. Blaming stationary sources has helped to justify all manner of restrictions on sources such as oil refineries,

manufacturers, print shops, dry cleaners, wood-burning stoves, and charcoal lighter fluids. The tunnel study findings, which have been substantiated in subsequent tests, suggest that too much regulation is aimed at nickel-and-dime problems.

Lawson figured that the Air Resources Board had to find out more about emissions as they really occur on the road. He had heard about a new device that measures carbon monoxide in exhaust from cars as they travel along the road. The device, called a remote sensor, had been developed by a chemist at the University of Denver, Donald Stedman.

If Doug Lawson is an unassuming Clark Kent figure, then Donald Stedman is Errol Flynn's Robin Hood, speaking treason, fluently, to the seat of power. In a 1993 letter to the EPA, the transplanted Englishman declared that the only way to get him to stop accusing the EPA of intransigent behavior was for the EPA to stop behaving intransigently. And he'd be happy to argue the matter in court.

Stedman's work on remote sensing started in 1979, when he and colleagues at the University of Michigan constructed a very crude device to measure car emissions. There was no research money available and little interest at the time, but the makeshift unit was to Stedman's mind a "proof of concept."

That concept was deceptively simple: An infrared source shines a beam across the road. The beam passes through a car's exhaust plume and is altered by the gases. A detector on the other side of the road receives the altered beam and can infer the carbon monoxide content in the exhaust plume. The sensor would later be modified to read hydrocarbons content as well.

But it was some time before Stedman could raise money to improve upon his early model. He had sought funding from the EPA's Mobile Source Division but got nowhere. After relocating to Denver in 1983, Stedman received funding from the Colorado Office of Energy Conservation, selling the office on the idea that a fully honed remote sensor could be used to alert motorists with dirty engines that a tune-up would get them better gas mileage. Stedman of course saw that the really important implications of remote sensing would be in smog policy, not energy conservation, but he relished the opportunity to pursue the project whatever the funding source.

Stedman and his colleague Gary Bishop, who wrote the software for reading the incoming infrared signal, went to work. By December 1986 they had the sensor on the road and, as Stedman puts it, "It worked better than we had any right to expect." Stedman and Bishop measured the emissions of 618 on-the-road cars. From that early, limited demonstration, Stedman tentatively concluded that, contrary to then-accepted

theories, there was little or no necessary link between a vehicle's age and its level of emissions. The real variable was the condition of the engine. Eight years and one-and-a-half million cars (on four continents) later, those findings still stand.

In 1989, Lawson persuaded the Air Resources Board to do an on-road study using Stedman's device. Lawson and Stedman set it up in Lynwood, California, (just south of Los Angeles) and not only read the carbon monoxide of passing cars but flagged the gross polluters to check under the hood.

The Lynwood study advanced the two other major challenges to established thinking on smog. First: A majority of the pollution comes from a small minority of gross-polluting cars. Lawson and Stedman found that the dirtiest 10 percent of cars emitted 50 percent of the carbon monoxide, while the cleanest 50 percent emitted a mere 5 percent. The sharply skewed distribution of emissions casts traditional smog-check policy in an absurd light. Making everyone report for a biennial inspection is like making everyone spend a few days in jail for the crimes committed by just a few culprits. If there is a way to identify culprits and make only them report for engine adjustment, air quality could be improved at a fraction of the current cost of smog checks.

Therein lies the third great challenge, which since 1988 has been sending quakes through the air-policy establishment: Remote sensing indisputably works. Lawson and Stedman proved it in Lynwood by performing traditional smog tests on cars that had been flagged by the remote-sensor test and demonstrating that the two tests match. This and other methods have shown, time after time, that remote sensing makes accurate measurements of carbon monoxide and hydrocarbons.

In 1991 field research, Lawson, now at the University of Nevada's Desert Research Institute, and Stedman further debunked the myth of the dirty old clunker and substantiated that maintenance is more important than age when it comes to emission levels. But they also discovered another major source of trouble by looking under the hood of flagged cars: tampering with emission controls. About two-thirds of the gross polluters had emission-control systems out of conformance with the law, and a majority of those systems had been deliberately tampered with. Since the under-the-hood follow-up was voluntary, the figures probably underestimate tampering. Lawson and Stedman tell of the gross-polluting new Porsches that sped off as soon as they heard the words "not under obligation."

If tampering is widespread and causes high emissions, then a scheduled emissions inspection every two years is a waste of time and money. It is like combatting drunk driving by having people report for a biennial breathalyzer test. Existing remote-sensing

technology, however, can automatically match a car's emissions to its license plate, and gross polluters can be sent a fine or a citation to report for closer inspection. Because of its extremely low cost (about 50 cents per car) and portability, remote sensing is capable of random but pervasive surveillance while inconveniencing only the guilty few.

Of course, it is one thing for researchers to make important discoveries and publish scientific articles. It is quite another thing for state officials and lawmakers to recognize new developments. That is where a charismatic L.A. deputy district attorney named Joseph Charney has made a big difference. Stedman says that Charney has been enormously influential, first by utilizing remote sensing in actual smog busts, but more so by his tireless promotion of the technology in political circles. Furthermore, says Stedman, Charney is a genuine environmentalist. As a student in the 1960s, Charney leaned leftward and took up law as a way to serve the poor and environmental causes. In his late 30s, however, Charney came over to "free-market environmentalism" and is now an avid reader of economist and social philosopher F. A. Hayek.

Charney learned about Stedman's remote sensor from early coverage in REASON. (See "Going Mobile," August/September 1990.) Co-workers in the environmental crimes division of the L.A. County district attorney's office had long suspected that smog checks weren't working, but no one knew how to ferret out dirty cars. "I saw immediately that remote sensing would be the missing piece," says Charney.

Another convert to remote sensing in 1990 was Republican Rep. Joe Barton of Texas, who sits on the House Energy and Commerce Committee. He read a Wall Street Journal article by Stedman that trashed oxygenated fuels and promoted remote sensing. Barton, who has a master's degree in engineering, got excited about the idea and contacted Stedman. Then the congressman had a remote sensing clause included in the 1990 Clean Air Act. This stroke was crucial—now remote-sensing supporters could hope to persuade the EPA to favor remote sensing in its enforcement of the Clean Air Act. And if the agency failed to pursue the technology, they could claim in court that the EPA was straying from its mandate.

Meanwhile, Lawson was exploring the extent of the failure of smog checks. After the Lynwood study, he realized that the old orthodoxies about mobile-source emissions would never stand up to empirical analysis. "I said to myself," he recollects, "I bet the data of on-road emissions have never been carefully analyzed."

Lawson took the Air Resources Board's data from hundreds of on-road emission readings and searched for a relationship between the emission levels and the time since the car's last smog check. If the smog-check program was making cars clean, he

reasoned, then the typical car would get progressively dirtier with the passage of time since its last smog check. In fact, the data showed nothing of the kind. On average, cars that had recently passed smog checks were just as dirty as cars soon due for inspections.

Tampering by motorists was only part of the explanation. Charney's people were tracking another significant contributing factor: fraudulent smog-check inspectors. Armed with binoculars and video cameras, the deputy district attorney's team staked out service stations that performed smog checks, recording incoming and outgoing cars. They compared their observations with the state's on-line smog-check records of when the stations tested responsible only for inspecting cars, not for repairing them. The EPA claims, with some evidence, that decentralized programs are more open to corruption and fraud than centralized programs. But after working out plans for new centralized programs in every other smog-check state, the EPA met massive resistance in cars. Station records showed testing when no such car was observed at the station. Crooked smog inspectors would receive registration information by fax about a car seeking smog certification, enter the information into the system, and do the tailpipe test on a house car, a practice known as "cleanpiping." Charney's division busted more than 40 smog inspectors for faking smog checks.

From the cleanpiping records, Charney picked up the trail of the Bell Cab company, the recipient of many fraudulent certificates. Using a Stedman remote sensor leased by the Air Resources Board, Charney monitored taxicab emissions at Los Angeles International Airport. Bell's cabs were filthy; subsequently, Charney raided the company's office and verified emission-control device tampering. Charney is currently pursuing used-car dealers in similar fashion. "You could probably show that Charney has done more to clean the air in L.A. than smog check has in the same period," says Stedman.

Smog checks, then, weren't failing just because of bad science. They were also incapable of guarding against all kinds of fraud, including tampered engines, bribed inspectors, and cleanpiping scams. By 1992, everyone agreed that California's decentralized smog-check program was an abject failure.

But they disagreed bitterly over what to do about it. Nationwide, the EPA was pushing hard for centralized inspection that would separate the testing and repairing functions. Air Resources Board officials backed a modified centralized scheme proposed by their consultant, Sierra Research (no connection to the Sierra Club). And, not surprisingly, California's 9,000 practicing smog-check stations lobbied for preservation of the current system.

Then there were the skeptics such as Charney, Lawson, and Stedman. "Arguing over whether we should have centralized scheduled inspection or decentralized scheduled inspection is like arguing over whether we should paint the equipment blue or paint it green," says Charney. Instead of trying to somehow salvage the current system, a quickly emerging band of revisionists pushed for a complete rethinking of smog-check policy. With the results of Lawson and Stedman to lean on, they proved to be remarkably effective.

California's smog-check program had been designed by the Air Resources Board under the leadership of Thomas Austin, who left the agency in 1981 to form Sierra Research. In 1992, Sierra was hired to write the Inspection and Maintenance Review Committee's report, which endorsed a modified centralized inspection scheme. The board supported Sierra's pitch to reinforce scheduled inspection and downplay remote sensing.

California lawmakers pondered whether to follow the Air Resources Board-Sierra proposal or to second-guess the state agency. Revisionist notions were reaching state legislators, notably from Buzz Breedlove at the California Research Bureau. In 1991 Breedlove had written a powerful report advocating remote sensing. Stedman says that Breedlove was very important in sowing the seeds of doubt in Sacramento. The legislature was also growing leery of the cozy relationship between the Air Resources Board and Sierra Research.

The state Senate Transportation Committee decided to second-guess. Lawson appeared before the committee and recommended that a "blue-ribbon" panel be formed to study his findings and those of Sierra. The Senate committee took Lawson's advice. Among the blue-ribbon members were Charney and University of California at Irvine economist Charles Lave, who was to produce a research report. Additionally, the Senate committee hired the RAND Corporation to report on the alternative smog-check systems.

Things went badly for the Air Resources Board and Sierra. Not only did both Lave and Jerome Aroesty of RAND confirm Lawson's findings, they also concluded that the Air Resources Board-Sierra study lacked both evidence for the effectiveness of their proposed program and grounds for downplaying remote sensing. The Air Resources Board-Sierra report, it turned out, relied on a major undercover study also carried out by those same groups. Lave and Aroesty found the study very poorly designed and documented, even to the point that it surreptitiously departed from its reported protocol.

Sierra was disgraced, and the Air Resources Board was chagrined. The negative reports led the legislature to bypass the Air Resources Board in ensuing deliberations, listening instead to revisionist voices such as Charney and Lave. The smog-check skeptics were

making good headway in California at the state level, but there was still the EPA to contend with.

Lave's and Aroesty's findings criticized not only the Air Resources Board-Sierra scheme, but the EPA's centralized scheme as well. Lave proposed that the state postpone major changes except to supplement the current program with remote sensors. The California Senate supported a bill sponsored by Republican state Sen. Newton Russell that reflected Lave's advice: It included preservation of the current system, a new deployment of remote sensing, and the building of a few special test-only stations. Such a system combining remote sensing with the status quo was in open defiance of the EPA's push towards centralization.

Remote-sensing enthusiasts and the 9,000 licensed smog inspectors have formed a cool alliance. In the near term, they are united against centralized inspection. But looking ahead, the inspectors have mixed feelings about remote sensing. Charney has told smog-check operators that if the government can identify and punish on-road gross polluters, it will leave inspection and maintenance to unregulated private-sector action. "The government should police outputs, not inputs," he says. "If remote-sensing moves forward without serious hitches, the government should reevaluate the need for scheduled inspection." If a remote-sensing program shows scheduled inspections to be unnecessary, the smog-check stations would lose that end of the business. They would, however, gain business in repairing dirty cars detected by remote sensing.

In late 1993, the EPA and the Clinton administration played tough with California, threatening to withhold highway funds. But it became evident that California would test the threat. EPA chief Carol Browner backed off. When the Assembly passed its version of the Russell bill, Browner struck a deal with the Democratic leadership of the state Senate. She said that if the Senate sat on the issue until the new year, the feds would defer sanctions. Browner was hoping to buy some time, or perhaps to dissipate revisionist momentum.

When the legislature reconvened early this year, however, the state stuck to its guns. And before the EPA could even consider punitive sanctions, the Northridge earthquake hit on January 17, collapsing several interstate highways in and around Los Angeles. Even as the extensive quake damage handed the EPA a huge bargaining chip, the Clinton administration realized that withholding highway funds would also alienate voters in the nation's most populous state.

So instead the EPA and California reached an accord in March described by the Los Angeles Times as a "substantial retreat" by the EPA. The agreement includes a pilot

remote-sensing program for Sacramento County and a small number of test-only stations for inspecting gross polluters, tamperers, and a few regular motorists. As for the 9,000 licensed smog-check stations, except for possible equipment changes and new training, they will carry on as before.

By making the deal, the EPA may have doused the smoldering fire in California, but it certainly fanned the flames of resentment in the more than 20 states forced by the EPA to adopt centralized smog-check systems. After all, if California doesn't have to go centralized, why should they? Nevada and Georgia have already suspended their plans, pending further negotiations with the EPA. William Becker, director of a Washington-based organization of state and local air-pollution regulators, told the Los Angeles Times, "I've not seen a backlash on an issue like I have on this one. It was as if a tremendous shot was heard across the country."

On the federal level, members of Congress are organizing action against the EPA. With the ineffectiveness of traditional smog-check systems becoming widely accepted and the freezing of highway funds no longer a credible threat, the EPA has lost most of its leverage. Whether the EPA will surrender unconditionally on centralized inspection remains to be seen.

But the California accord is critical not only in the smog-check battle. It is also central to the the much-larger war over the EPA's attempts to implement the 1990 Clean Air Act. Perhaps that's why the EPA has been fighting so harshly for centralized inspection and against remote sensing. The revisionist learning that argues against scheduled emissions inspection also argues against alternative fuel programs, electric vehicle quotas, engine-emission standards, and mandatory car pooling—all of which figure prominently in the EPA's current clean-air agenda. If remote sensing can pinpoint the real culprits at very low cost, the air-quality justifications for other broad-based command-and-control programs are vitiated.

Consider car pooling requirements. A regional regulation for greater Los Angeles requires large employers to promote car pooling. This has taken some cars off the road, but program costs are astronomical. The annual cost of getting one car off the road works out to \$3,000. Using generous estimates of pollution from such cars, the program reduces carbon monoxide emissions at a rate of \$11,700 per metric ton. By contrast, a remote-sensing demonstration project in Provo, Utah, reduced carbon monoxide for only \$200 per metric ton. Dollar for dollar, remote sensing cleaned the air 60 times better than mandatory car pooling.

With the environmental and economic benefits of remote sensing gaining widespread acceptance, it is clear that the EPA has lost the smog-check war. It is no longer an issue of whether remote-sensing technology is superior to the centralized system espoused by the EPA. The only questions remaining are when the EPA and the Clinton administration will come on board and to what extent they will allow good science to guide air-control policy.

Lawson continues to produce scientific papers challenging established thinking and spurring modelers to make better estimates of smog inventories. True to form, he has recently demonstrated that the majority of cars that fail in the current smog-check program are only marginal emitters and that most of these marginal emitters actually increase their pollution emissions after their smog-check repairs. A new paper concludes that centralized testing is slightly better than decentralized, but neither is significantly better than no program at all-yet Californians currently expend half a billion dollars a year on smog checks.

Charney has formed a group, the Air Policy Council, to communicate scientific developments to policy makers; Lawson and Lave are members. Charney has also been nominated to serve on the committee overseeing the remote-sensing program for Sacramento County.

Stedman continues to blast the old guard and to refine his remote-sensing unit. Currently, he is developing a companion remote-sensing beam to read nitrogen-oxide emissions. With the EPA in retreat and his remote-sensing technology coming into vogue, Stedman pauses to muse over the EPA's current predicament: "I think it's hilarious."

Daniel Klein is assistant professor of economics at the University of California, Irvine, and co-author of the Lave report. Christina Saraceni is an economics student at U.C.-Irvine.

<http://www.foxbusiness.com/features/2017/03/05/german-chancellor-angela-merkel-to-testify-on-volkswagen-emissions-scandal.html>

VW-Shell Oil-Parsons Corp-EPA Partners?

CAPP contact: Charlie Peters (510) 537-1796 cappcharlie@earthlink.net