San Jose State University

From the SelectedWorks of Annette M. Nellen

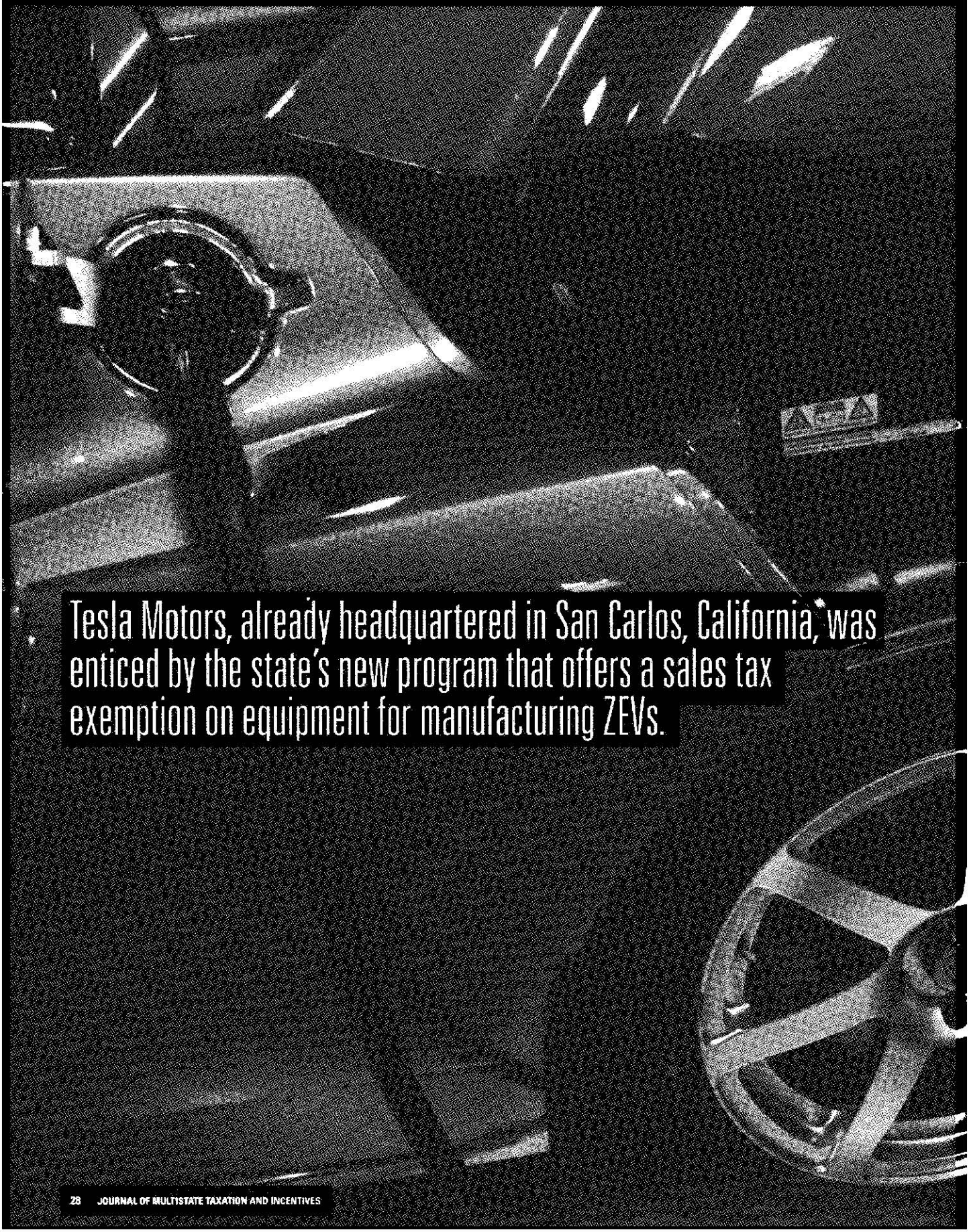
2008

Incentives Bring Zero-Emission Vehicle Manufacturing to California

Annette M. Nellen, *San Jose State University*

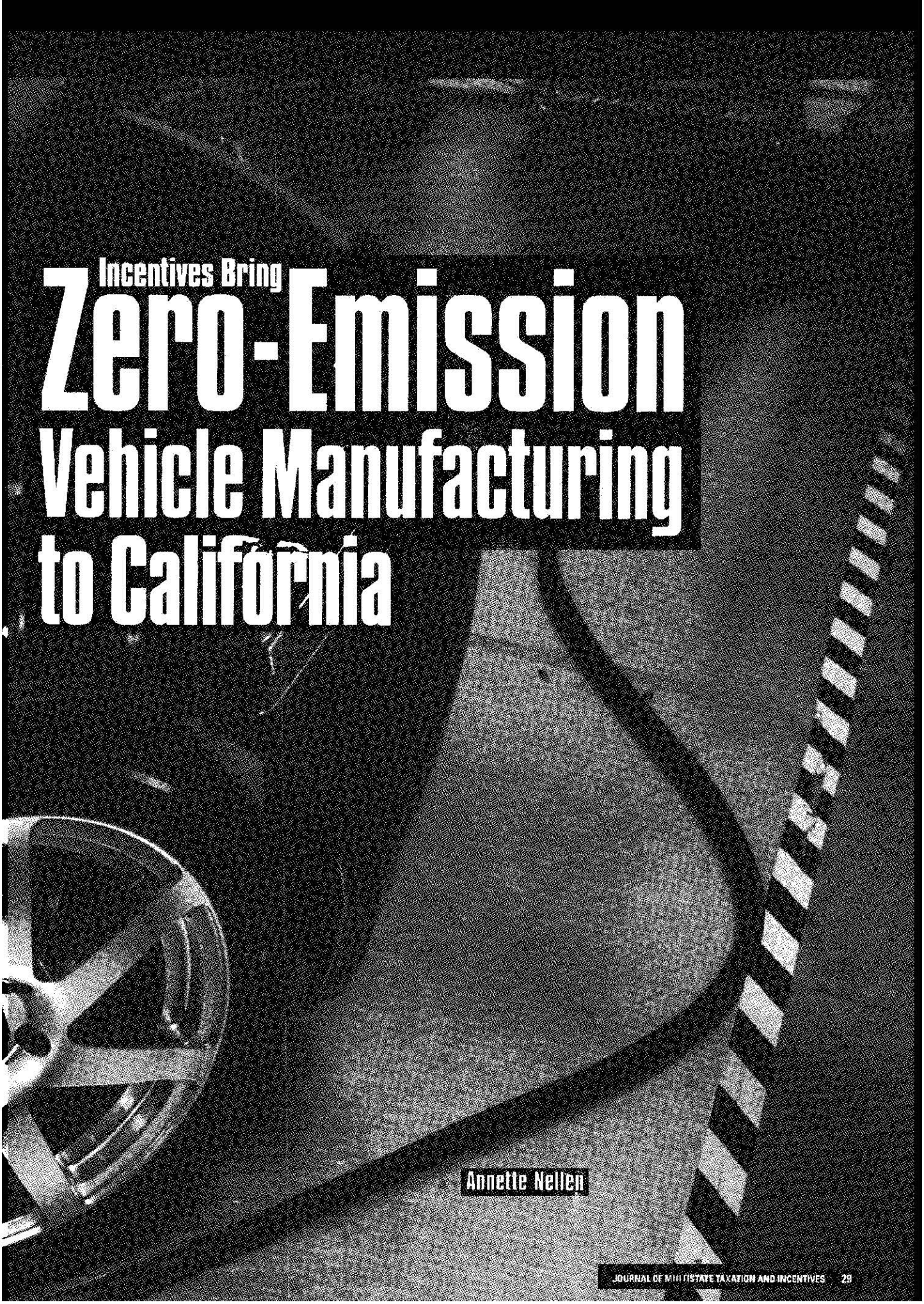
Available at: https://works.bepress.com/annette_nellen/14/

Incentives Bring Zero-Emission Vehicle Manufacturing to California
Nellen, Annette
Journal of Multistate Taxation and Incentives; Nov/Dec 2008; 18, 8; ProQuest Central
pg. 28



Tesla Motors, already headquartered in San Carlos, California, was enticed by the state's new program that offers a sales tax exemption on equipment for manufacturing ZEVs.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.



Incentives Bring Zero-Emission Vehicle Manufacturing to California

Annette Nellen

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

In June 2008,

California's Governor Arnold Schwarzenegger and State Treasurer Bill Lockyer announced that Tesla Motors, Inc. would produce its new four-door, five-passenger electric sedan (the Model S) in California.[1] Tesla, already headquartered in San Carlos, California (where the company also maintains its engineering and research and development facilities), was enticed by the state's new program that offers a sales tax exemption on equipment for manufacturing zero-emission vehicles (ZEVs). In contrast to the large number of states that offer general sales and use tax exemptions for purchases of machinery and equipment used in manufacturing, California's sales tax law includes no such exemption. Moreover, this ZEV manufacturing exemption is not specifically provided for in the state's sales tax law; rather it is a part of the state's efforts to reduce pollution and promote clean air.

California has been at the forefront in reducing vehicle emissions; its ZEV goals date back to 1990. Nevertheless, the announcement of the California manufacturing decision was surprising to many observers. Tesla's first electric vehicle—a high-end sports car (the Tesla Roadster)—is manufactured in England (the Roadster's battery pack is manufactured in California, where the vehicles' final assembly also takes place)[2] and it had planned to manufacture its new, lower-priced sedan in New Mexico.[3] Also, as discussed further below, in light of California's low business climate rating, and the fact that its manufacturer's investment tax credit and sales tax exemption for new manufacturers expired in 2003 (and, as noted above, the state's lack of a general manufacturing exemption), the announcement of new manufacturing in the state was unexpected.

The following discussion looks at California's new sales tax exemption program for ZEV manufacturing equipment, and includes an overview of the state's air quality and greenhouse gas emission reduction goals, which are the impetus for California's program that enticed Tesla. First, an overview of California's business climate sets the stage for an illustration of how the state's various environmental goals and new funding sources might affect that climate. Information is provided also on related California alternative fuel incentives, California's expectations in this area, some ZEV incentives offered by a few other states, and issues and opportunities surrounding these incentive programs.

California's Business Climate

The high cost of living in many areas of California, along with high income- and sales-tax rates, have caused the state to be ranked towards the bottom in terms of its business climate. One 2008 survey found that, among all states, California had once again ranked at the bottom with regard to how respondents viewed the state's business climate.[4]

Also, the Tax Foundation ranked California 47th among states in terms of business tax climate. It found that California's state and local tax burden of 10.5% of income is the sixth highest among the states (the national average is 9.7%).[5]

A little history. In 1993, California enacted two incentives to stimulate business in the state. New manufacturers could claim a partial sales tax exemption on certain equipment, while other manufacturers could claim a 6% investment tax credit against their income and franchise tax liabilities. These provisions were scheduled to sunset as early as 2001 if the number of manufacturing jobs in the state was not at least 100,000 more than in 1994.[6] Under these terms, the provisions expired at the end of 2003.[7]

With the loss of the manufacturing tax incentives, California's current key business tax incentives are the research credit and enterprise zone incentives.[8] There are no specific sales tax exemptions for manufacturing or R&D equipment.

As discussed herein, California does have incentives for certain green technologies. Some of these benefits are provided not through the tax law, however, but through grants and special programs. Thus, they are easily overlooked in comparing tax incentives among states.

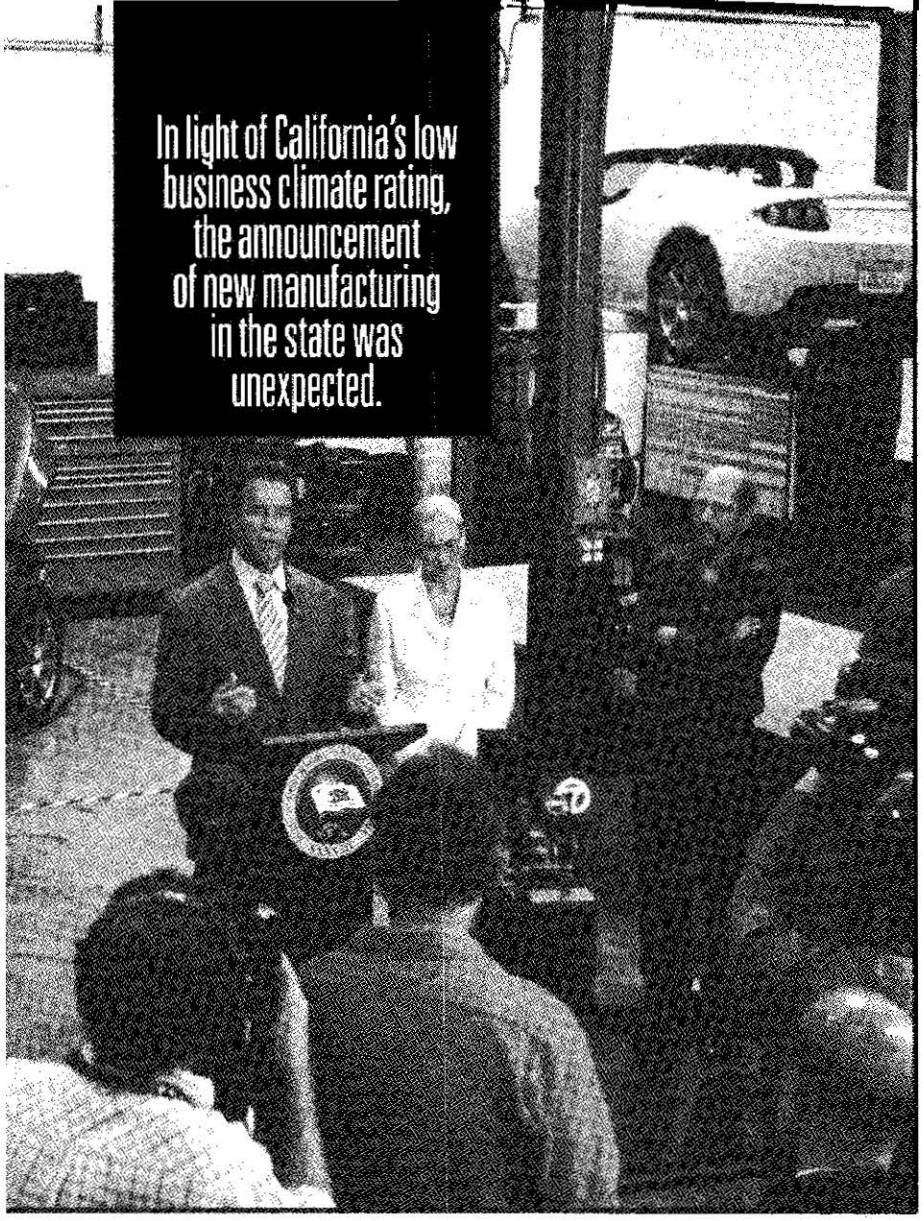
California's Air Quality and Greenhouse Gas Emission Goals

California has been on the forefront in efforts to improve the state's air quality. The California Air Resources Board (ARB), which was formed in 1967 as a part of the state's Environmental Protection Agency (EPA), has administered various programs to reduce tailpipe emissions.[9] In 1990, the ARB established the ZEV Program, which required that, by 1998, 2% of all vehicles produced by large manufacturers for sale in California had to be ZEVs (e.g., cars that run on electric batteries), with that percentage increasing to 5% in 2001 and 10% in 2003. Due to litigation, however, as well as manufacturers' concerns over the program timeline and costs, various modifications have been made to that timeline and the type of vehicle required.[10]

Despite modifications to the original 1990 goals, the ARB remains committed to getting more ZEVs on the road. According to the ARB, more than 750,000 people in

ANNETTE NELLEN, Esq., CPA, is a tax professor and Director of the MST Program at San José State University, in San José, California. She is an active member of the tax sections of the ABA and AICPA and currently serves on the AICPA's Individual Income Taxation Technical Resource Panel. She maintains the 21st Century Taxation website and blog at www.cob.sjsu.edu/nellen_a/TaxReform/21st_century_taxation.htm.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.



In light of California's low business climate rating, the announcement of new manufacturing in the state was unexpected.

California drive vehicles that are either partial ZEV or advanced technology partial ZEV, with near-zero tailpipe emissions. These partial ZEVs are 80% cleaner than the average 2002 model-year car.[11]

California has also been on the forefront in setting goals to reduce greenhouse gas (GHG) emissions. In 2005, Governor Schwarzenegger issued an Executive Order to reduce GHG emissions to 2000 levels by 2010, to 1990 levels by 2020 and to 80% below 1990 levels by 2050.[12] This ambitious plan was followed by the enactment of the California Global Warming Solutions Act of 2006.[13] This Act requires the ARB to establish rules and regulations that will lead to the state's achieving, by 2020, GHG emissions equal to 1990 levels (a 25% reduction).[14]

Various proposals have been made to help support technologies and actions that would enable California to meet its GHG emission reduction goals. One notable proposal—the California Alternative and Renewable Fuel, Vehicle Technology, Clean Air, and Carbon Reduction Act of 2007—was enacted in October 2007.[15] As of July 2008 and continuing through 2015, this Act increases vehicle and vessel registration fees, certain service fees for identification plates, and smog abatement fees. The additional revenue is earmarked for three special funds (the Alternative and Renewable Fuel and Vehicle Technology Fund, the Air Quality Improvement Fund, and the Enhanced Fleet Modernization Subaccount) established by the Act for use in implementing programs aimed at improving air quality and reducing GHG emissions.

The 2007 Act specifies the types of activities to be pursued (e.g., funding air quality improvement projects, and developing and deploying technology and alternative and renewable fuels). Possible fund uses include grants and various other incentive programs. According to the ARB, the fee increases are expected to provide around $200 million annually for the three new funds to support the similarly named new programs (the Alternative and Renewable Fuel and Vehicle Technology Program, the Air Quality Improvement Program, and the Enhanced Fleet Modernization Program).[16]

To achieve its air quality and GHG emission reduction goals, California has focused heavily on transportation. Sources estimate that more than 40% of California's GHG emissions are from transportation. In addition, the transportation sector relies on petroleum-based fuels (which generate GHGs and pollutants) to supply 96% of its energy needs.[17]

California's ZEV Manufacturing Incentives

The sales tax exemption California offered to Tesla was made possible through an obscure provision in the state's tax law and a new program created in June 2008. Key to the incentive is a financing authority created by the legislature in 1980—the California Alternative Energy Source Financing Authority.[18] The legislation was designed to provide financing for technologies that promote the development of renewable energy sources or that conserve scarce energy resources. In 1994, the title was changed to the California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA), to reflect amendments intended to promote the development and commercialization of new transportation technologies that would, among other things, conserve energy, reduce air pollution, and promote economic development and job creation. The CAEATFA is a public instrumentality composed of five California officers: the state Treasurer (who serves as the chairperson), the Director of Finance, the state Controller, the chair of the state Energy Resources Conservation and Development Commission, and the president of the Public Utilities Commission.[19]

At its June 2008 meeting, CAEATFA adopted a staff recommendation to provide a sales tax exemption for purchases of equipment used in manufacturing ZEVs.[20] The goal of this exemption program is to "create a strong new ZEV industry within California that reduces greenhouse gas emissions and creates new long-term high value-added jobs."[21]

Under California law, CAEATFA projects can be set up to be tax exempt. In connection with such projects, transfer of title to tangible personal property to the CAEATFA by a participating party, or a lease of or transfer of title to such property by CAEATFA to

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Some of these benefits are provided not through the tax law, however, but through grants and special programs; thus, they are easily overlooked.

a participating party, is not subject to sales tax. In addition, while it holds title to property used in a project, the CAEATFA is not subject to property taxes or taxes on income derived from that property.[22]

Under the tax exemption program, CAEATFA typically finances the purchase of manufacturing equipment on behalf of a ZEV (or ZEV component) manufacturer through a bond or a loan, and then leases the equipment to the manufacturer, using the lease payments to pay down the debt (essentially, a sale-and-leaseback transaction). The manufacturer would then have the option to purchase the equipment, while retaining the benefit of the sales tax exemption.[23] According to the CAEATFA chair, the program is open to any ZEV manufacturer and applies to various ZEV technologies including "fuel cell electric vehicles, battery electric vehicles, plug-in hybrid electric vehicles, hydrogen internal combustion engines, advanced technology partial ZEVs, and neighborhood electric vehicles."[24]

To gain approval for financial assistance and a possible sales and use tax exemption for the purchase of ZEV manufacturing equipment, applicants must complete the following steps:

1. Submit an application to CAEATFA, together with a nonrefundable application fee (0.05% of the desired financing, with minimum and maximum fees of $250 and $5,000, respectively). The application must indicate the project's expected air pollutant and GHG emission reductions and the number of temporary and full-time jobs to be created.
2. Create a "time and responsibility" schedule (including a description of the deal structure, identification of all necessary documents, and identification of the various parties' responsibilities) to be agreed to by CAEATFA staff.
3. Obtain a determination from the state Board of Equalization that the arrangement meets all requirements and will be eligible for the sales tax exemption. If the applicant does not already have a California reseller's license, it will need to obtain one or form a "special purpose entity" (SPE) that will obtain the license.
4. Secure a resolution from the CAEATFA Board approving the transaction, subject to the occurrence of the events under steps 5 and 6, and authorizing the CAEATFA staff to enter into the contracts necessary to complete the transaction.
5. Purchase (or have the SPE purchase) the ZEV manufacturing equipment at wholesale using the reseller's license.
6. Sell the equipment to CAEATFA.
7. Enter into a lease agreement with CAEATFA whereby CAEATFA transfers the equipment to the applicant.
8. Upon installation of the equipment, ownership is transferred from CAEATFA to the applicant, in accordance with the terms of the lease.
9. At the financial closing, pay all project fees, which include the CAEATFA's administrative fee plus reasonable and necessary out-of-pocket expenses, and fees for bond counsel, Attorney General and State Treasurer's offices, and any financial advisor or underwriter. The CAEATFA's administrative fees are the following percentages of the requested financing: (a) for applicants meeting CAEATFA small business criteria: 0.6% if the financing is greater than $5 million, 0.5% for financing greater than $2.5 million but less than $5 million, and 0.4% for financing less than $2.5 million; and (b) for all other applicants, 0.6%.[25]

Tesla's benefits. The estimated cost of Tesla's ZEV manufacturing equipment is around $100 million, resulting in a sales tax savings of as much as $9 million.[26] In addition, Tesla will be eligible for a grant of about $1 million in Employment Training Panel Workforce Development Funds, for training its workers.[27] Moreover, if the company decides to locate the new plant in a California enterprise zone, additional tax incentives will be available.[28]

Additional California Incentives: Alternative Fuel Vehicles

In 2006, California set aside $1.8 million to provide rebates to buyers of specified new alternative fuel vehicles between 5/24/07 and 3/31/09 (and to the extent funds remain available). Under this Alternative Fuel Vehicle Incentive Program, a Tesla Roadster qualifies for the maximum rebate of $5,000.[29]

From 1991 to 1995, California offered a tax credit in connection with the purchase

---

[1] See "News Release: Treasurer Lockyer Announces Financial Incentive to Encourage Zero-Emission Vehicle Manufacturing in California" (6/30/08), available on the California State Treasurer's website, at www.treasurer.ca.gov (click on "News Releases").

[2] See Press Release, "Tesla Motors to Manufacture Sedan in California" (6/30/08), available on the Tesla Motors, Inc. website, at www.teslamotors.com (click on "media" and "press room").

[3] Yi, "Tesla to build new electric sedan in Bay Area," San Francisco Chronicle, 6/30/08, page B-1; also available on the newspaper's website, at www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2008/06/30/BATH11GGP2.DTL.

[4] See "Texas, North Carolina and Georgia Viewed as Best States for Business in New Survey of Corporate Executives and Location Advisors" (7/28/08), available on the Yahoo! Finance website, at http://biz.yahoo.com/prnews/080728/nym011a.html?.v=2. The survey was conducted by Development Counsellors International (DCI), an economic development and tourism marketing and public relations firm. The full survey is available on the DCI website, at www.aboutdci.com/winningstrategies.aspx.

[5] See "The Facts on California's Tax Climate" (The Tax Foundation), available on the organization's website at www.taxfoundation.org (select "Research Areas," "State Tax Policy and Data," and "California").

[6] Cal. Rev. & Tax. Code § 6377 (manufacturer's sales tax exemption for new businesses) and former § § 17053.49 (personal income tax) and § 23649 (corporate franchise tax). For more background on the MIC, see, e.g., Miles, "The California Manufacturers' Investment Credit 'In-Lieu' Refund Provision—A New Twist," 13 JMT 20 (Nov/Dec 2003); Dakessian, Ewing, and Micheli, "California SBE Affirms Application of Federal ITC Principles to the State's MIC," 13 JMT 14 (May 2003); Micheli, Herbert, and Vesely, "SBE Voids Portion of FTB's Regulations in California's First MIC Appeal," 12 JMT 10 (September 2002); and Micheli and Herbert, "California Audits the Manufacturer's Investment Credit: A Look at the Major Issues," 11 JMT 24 (July 2001).

[7] See Cal. Franchise Tax Bd. (FTB) Notice No. 2003-10 (12/08/03).

[8] See, e.g., Labhart, "SBE Ruling Eases Requirements to Claim California Enterprise Zone Hiring Credit," 17 JMT 34 (Nov/Dec 2007); Hargett, Pieroni, Kos-Read, and Lockman, "Claiming California Enterprise Zone Credits: Be Prepared for the Changes," 17 JMT 8 (June 2007).

[9] See "A brief history of the Air Resources Board," available on the ARB website at www.arb.ca.gov (click on "About ARB," "California's Air Quality History"). Additional information on low-emission vehicles and changes to California's ZEV program can be found at the Union of Concerned Scientists (UCS) website, at www.ucsusa.org (click on "Clean_Vehicles"). As noted on the site, the UCS is a science-based, nonprofit organization concerned with the environment. The UCS began in 1969 as a collaboration between MIT students and faculty, and now has members from all walks of life. It uses research and citizen action to seek responsible changes in government policy, corporate practices, and consumer choices.

[10] See "The Zero Emission Vehicle Program—2008" (Cal. EPA, ARB Fact Sheet, 5/6/08), available on the ARB website at www.arb.ca.gov (click on "Fact Sheets/FAQs," "Vehicles: Zero Emission Vehicle Program Factsheets," "ZEV Program Fact Sheet").

[11] *Id.*

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Federal Incentives and Programs for Renewable and Efficient Energy

The accompanying article discusses a few of the tax and other incentives offered by California and some other states to encourage the development and commercialization of new alternative fuel technologies and vehicles. An analysis of all such state incentives is beyond the scope of this article.

The federal government also provides incentives in this area. The following list (including laws, regulations, and programs, and derived from the "Energy Efficiency and Renewable Energy" section of the U.S. Department of Energy's website, at www.eere.energy.gov (click on "Popular Topics: Alternative Fuels," "Incentives & Laws," "Federal Incentives and Laws")) is a fairly extensive catalog of those benefits:

INCENTIVES

- Alternative Fuel Excise Tax Credit (IRC Section 6426).
- Alternative Fuel Infrastructure Tax Credit (IRC Section 30C).
- Biobased Transportation Research Funding (23 USC § 502 and 7 USC § 8109).
- Biodiesel Income Tax Credit (IRC Section 40A).
- Biodiesel Mixture Excise Tax Credit (IRC Section 6426).
- Biomass Research and Development Initiative (7 USC § 8601).
- Fuel Cell Motor Vehicle Tax Credit (IRC Section 30B).
- Heavy-Duty Hybrid Electric Vehicle (HEV) Tax Credit (IRC Section 30B).
- Light-Duty Hybrid Electric Vehicle (HEV) and Advanced Lean Burn Vehicle Tax Credit (IRC Section 30B).
- Qualified Alternative Fuel Motor Vehicle (QAFMV) Tax Credit (IRC Section 30B).
- Renewable Energy Systems and Energy Efficiency Improvements Grant (7 USC § 8106).
- Small Agri-Biodiesel Producer Tax Credit (IRC Section 40A).
- Small Ethanol Producer Tax Credit (IRC Section 40).
- Value-Added Producer Grants (VAPG) (7 USC § 1621).
- Volumetric Ethanol Excise Tax Credit (VEETC) (IRC Section 6426).

LAWS AND REGULATIONS

- Aftermarket Alternative Fuel Vehicle (AFV) Conversions (40 CFR § 85).
- Alternative Fuel Definition (42 USC § 13211).
- Alternative Fuel Definition—Internal Revenue Code (IRC Section 6426).
- Alternative Fuel Tax Exemption (IRS Publication 510—Excise Taxes (including Fuel Tax Credits and Refunds)).
- Clean Air Act Amendments of 1990 (see "The Plain English Guide to the Clean Air Act" (U.S. Environmental Protection Agency), at www.epa.gov/air/caa/peg/).
- Corporate Average Fuel Economy (CAFE) (49 USC § 329).
- High Occupancy Vehicle (HOV) Lane Exemption (23 USC § 166).
- Idle Reduction Facilities Regulation (23 USC § 111).
- Import Duty for Fuel Ethanol (Harmonized Tariff Schedule No. 99010050; P.L. Nos. 96-499, 99-514, and 109-423).
- Renewable Fuel Standard (RFS) Program (42 USC § 7545(o) and 40 CFR § § 80.1100 through 80.1167).
- Tier 2 Vehicle and Gasoline Sulfur Program (42 USC § 7521).
- Updated Fuel Economy Test Procedures and Labeling (40 CFR § 600).
- Vehicle Acquisition and Fuel Use Requirements for Federal Fleets (42 USC § 13212 and Executive Order 13423, 1/24/07 ("Strengthening Federal Environmental, Energy, and Transportation Management")).
- Vehicle Acquisition and Fuel Use Requirements for Private and Local Government Fleets (42 USC § 13257).
- Vehicle Acquisition and Fuel Use Requirements for State and Alternative Fuel Provider Fleets (42 USC § § 13251 and 13263a, and 10 CFR § 490).
- Vehicle Incremental Cost Allocation (42 USC § 13212(c)).

PROGRAMS

- Air Pollution Control Program ("eligible applicants may receive federal funding for up to 60% of project costs to implement their plans") (42 USC § 7405).
- Alternative Transportation in Parks and Public Lands Program (49 USC § 5320).
- Biobased Products and Bioenergy Program (7 USC § 8109).
- Clean Agriculture USA (part of the U.S. Environmental Protection Agency's National Clean Diesel Campaign (see www.epa.gov/cleandiesel/), "which offers funding for clean diesel agricultural equipment projects").
- Clean Cities ("supporting local initiatives to adopt practices that reduce the use of petroleum in the transportation sector"; see www.energy.gov).
- Clean Construction USA ("promotes the reduction of diesel exhaust emissions from construction equipment and vehicles by encouraging proper operations and maintenance, use of emission-reducing technologies, and use of cleaner fuels"; see www.epa.gov/cleandiesel/).
- Clean Fuel Fleet Program (CFFP) (42 USC § 7586).
- Clean Fuels Grant Program (49 USC § 5308 and 49 CFR § 624).
- Clean Ports USA ("an incentive-based program designed to reduce emissions by encouraging port authorities and terminal operators to retrofit and replace older diesel engines with new technologies and use cleaner fuels"; see www.epa.gov/cleandiesel/).
- Clean School Bus USA ("provides funding for projects designed to retrofit and/or replace older diesel school buses"; see www.epa.gov/cleandiesel/).
- Congestion Mitigation and Air Quality (CMAQ) Improvement Program (23 USC § 149).
- Loan Guarantee Program (42 USC § 16513).
- National Clean Diesel Campaign (NCDC) (www.epa.gov/cleandiesel/).
- National Fuel Cell Bus Technology Development Program (NFCBP) (49 USC § 5309).
- Pollution Prevention Grants Program (42 USC § 13104).
- SmartWay Transport Partnership (provides grants "to states, nonprofits, and academic institutions to demonstrate innovative idle reduction technologies for the trucking industry"; see www.epa.gov/smartway).
- State Energy Program (SEP) Funding ("provides grants to states to assist in designing, developing, and implementing renewable energy and energy efficiency programs"; see www.energy.gov).
- Voluntary Airport Low Emission (VALE) Program (49 USC § 40101).

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

of low-emission motor vehicles or the conversion of vehicles to low emissions. The credit generally was limited to $1,000 per vehicle but it had an unlimited carryforward period.[30] Many local jurisdictions in California offer various incentives to encourage the purchase and use of zero- or low-emission vehicles, such as utility discounts, free parking, and carpool lanes.[31]

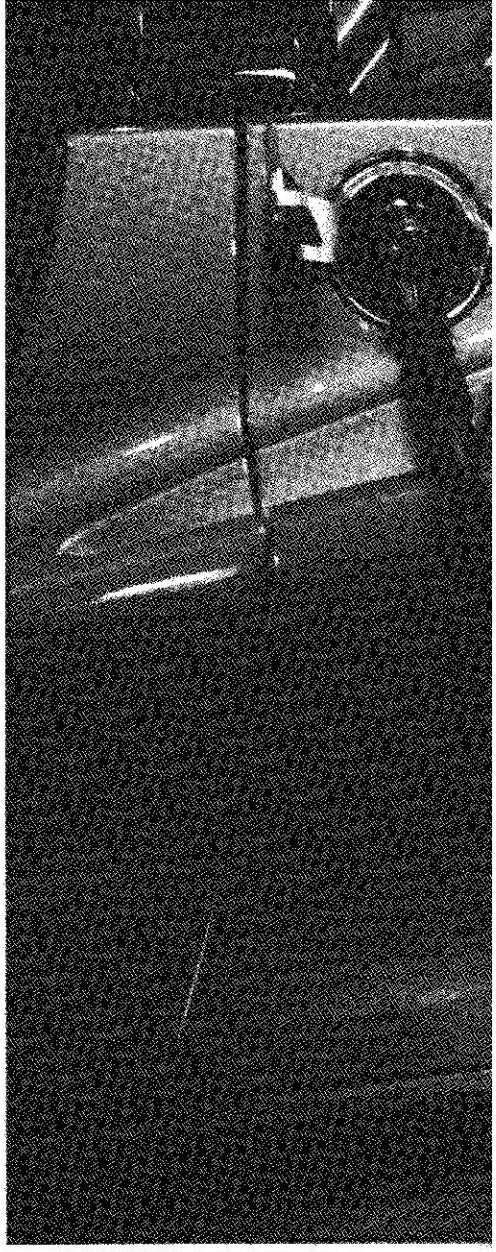
California's expectations. The primary benefits that California expects to derive from its alternative-fuel and low-emission programs are cleaner air and fewer GHG emissions, leading to improved health for Californians, reduced health care costs, and less damage to the state's crops. Economic growth and new job creation are expected as well. A study initiated by the ARB, in connection with the ZEV program in particular, found additional, secondary benefits in the areas of economic activity and technology. Details of some of these benefits are described below.

- There has been rejuvenated federal support for R&D in connection with electronic vehicles (EVs) and related technologies, mainly via increased funding from the U.S. Departments of Energy and Transportation.
- Industry consortia have been created to conduct R&D for EV and other vehicle technologies for which the risk factors had discouraged individual companies from pursuing these projects on their own.
- The increased ZEV-related R&D activity led to an increase in EV-related U.S. patents, from an average of only around seven per year (despite federal funding) in the 1980s to an average of about 55 patent applications per year since 1994.
- Four other states—New York, Maine, Massachusetts, and Vermont—have adopted ZEV standards based on the California program, which will facilitate the deployment of zero- and low-emission technologies nationally.
- R&D for ZEV-related technologies, such as fuel cells, batteries, and motors, has led to advances in other devices and processes including cell phones, computers, hearing aids, electric utilities, and other telecom applications and consumer products.[32]

Other States and the Federal Government

Several states have followed California's lead in setting air quality and GHG emission reduction goals. To help in achieving such goals, states often use financial incentives for manufacturers or consumers or both. These incentives help eliminate barriers to new technologies, such as higher costs and issues regarding the replacement of current equipment and vehicles.

Colorado and Georgia, among other states, offer tax incentives for alternative fuel vehicles. Colorado offers rebates and income tax credits in connection with the purchase of alternative fuel vehicles or the conversion of vehicles to use alternative fuels.[33] Georgia offers a similar income tax credit, as well



[12] Executive Order S-3-05, 6/1/05, available on the governor's office website at http://gov.ca.gov (click on "Newsroom," "Executive Orders," "June 2005").

[13] Cal. A.B. 32, 9/27/06 (L. 2006, ch. 488).

[14] *Id.* Also, see "Gov. Schwarzenegger Signs Landmark Legislation to Reduce Greenhouse Gas Emissions" (press release, GAAS:684:06, 9/27/06), available on the governor's office website at http://gov.ca.gov (click on "Newsroom," "Press Releases," "September 2006").

[15] Cal. A.B. 118, 10/14/07 (L. 2007, ch. 750), adding Ch. 8.9 (§ 44270 *et seq.*) to Part 5, Div. 26, of the Cal. Health & Safety Code.

[16] See "AB 118 Air Quality Improvement Program," available on the ARB website at www.arb.ca.gov (click on "Programs: Mobile Sources" and select "Air Quality Improvement Program").

[17] Executive Order S-01-07, 1/18/07, available on the governor's office website at http://gov.ca.gov (click on "Newsroom," "Executive Orders," "January 2007").

[18] Cal. Public Resources Code § 26000 *et seq.* (Stats. 1980, ch. 908; amended by Stats. 1994, ch. 1218).

[19] Cal. Public Resources Code § 26004. See also California Manual of State Funds, Funds 0731a and 0528, on the Department of Finance website for the California State Accounting and Reporting System, at www.dof.ca.gov/html/calstars/funds/0731a.doc and www.dof.ca.gov/html/calstars/funds/0528.doc. For more information generally, see the CAEATFA website at www.treasurer.ca.gov/caeatfa/.

[20] See "Consideration of Staff Recommendation Regarding the State Issuing Sales Tax Exemptions for Zero Emission Vehicles" (Agenda Item 4.A.1, Staff Summary, 6/25/08), on the CAEATFA website at www.treasurer.ca.gov/caeatfa/staff/20080625_4a.pdf. CAEATFA meeting agendas, staff reports, and related documents generally are available online at www.treasurer.ca.gov/caeatfa/agenda.asp.

[21] See "CAEATFA: Current Incentives," available online at www.treasurer.ca.gov/caeatfa (select "Current Incentives").

[22] Cal. Rev. & Tax. Code § 6010.8 and Cal. Public Resources Code § 26029.

[23] See "Consideration of Staff Recommendation," *supra* note 20, and "CAEATFA: Current Incentives," *supra* note 21.

[24] See "News Release," *supra* note 1.

[25] See "Approval Process for Financial Assistance (and Potential Sales and Use Tax Exemption) for the Purchase of ZEV Manufacturing Equipment," available online at www.treasurer.ca.gov/caeatfa/criteria.pdf.

[26] See Yi, *supra* note 3.

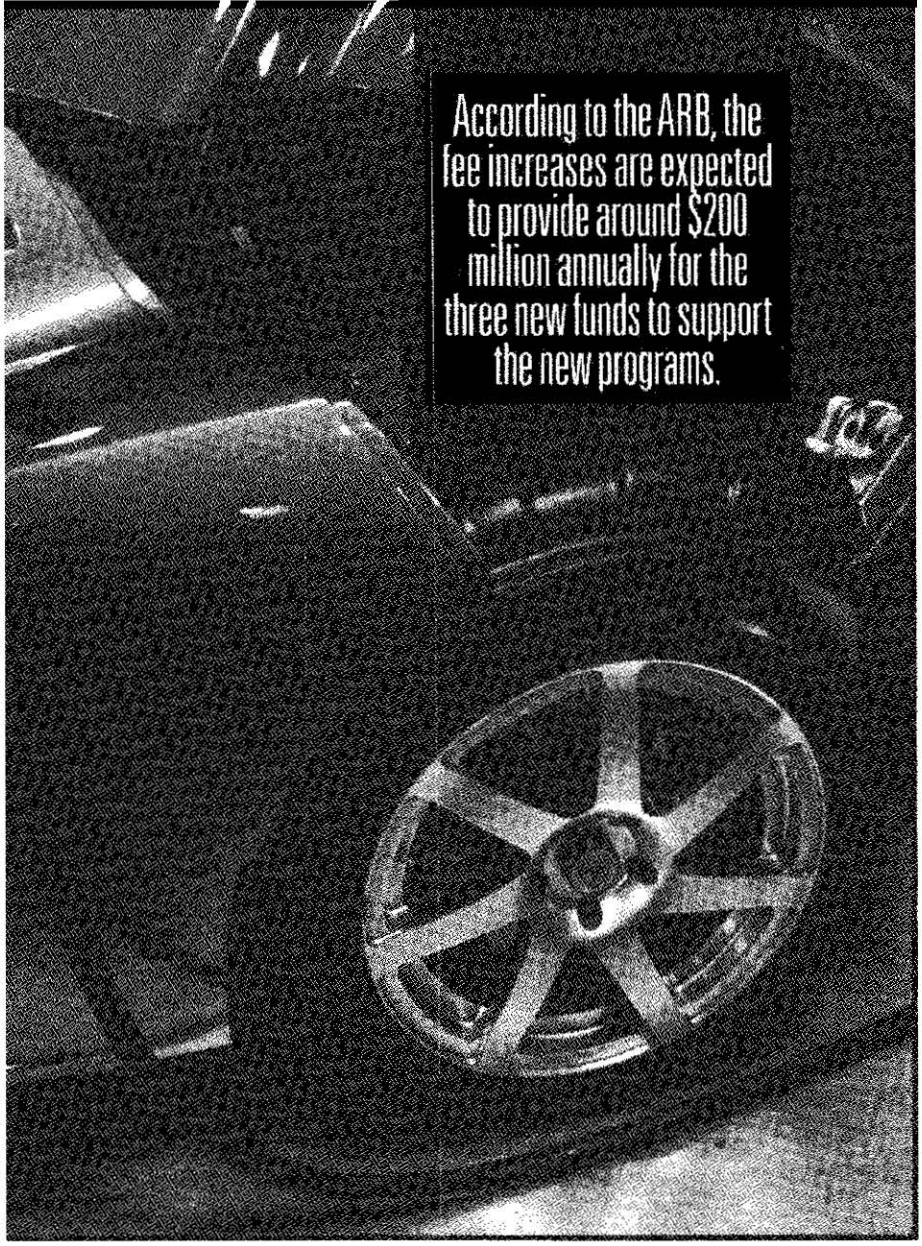
[27] See "Governor Schwarzenegger Celebrates Clean Technology Investment in California, Welcomes Tesla Motors Production to California" (press release, GAAS:486:08, 6/30/08), available on the governor's office website at http://gov.ca.gov (click on "Newsroom," "Press Releases," "June 2008"). Information on California's training funds program can be found on the website of the state's Employment Training Panel, at www.etp.ca.gov/. Also see, e.g., Labhart and Miles "California: Employment Training Panel Changes Funding, Adds New Program," 12 JMT 36 (Nov/Dec 2002); and Duscha and Melehani, "California: State Alters and Makes Permanent Job Training Incentive," 10 JMT 32 (Nov/Dec 2000).

[28] See "Governor Schwarzenegger Celebrates Clean Technology Investment in California," *supra* note 27. See also "Frequently Asked Questions About Enterprise Zone Tax Incentives," on the California Franchise Tax Board website, at www.ftb.ca.gov/FORMS/misc/1126.pdf. For more on California's enterprise zones, see, e.g., Labhart, *supra* note 8; and Hargett et al., *supra* note 8.

[29] The fund was created by Cal. A.B. 1811, 6/30/06 (L. 2006, ch. 48). The program is funded by the ARB and administered by the California Center for Sustainable Energy. More information (including program instructions and applications forms) is available on the Center's website at www.energycenter.org (click on "Programs," "Fueling Alternatives"). According to the website, the Center seeks to foster public policies and provide programs, services, information and forums that facilitate the adoption of clean, reliable, renewable, sustainable, and efficient energy technologies and practices.

[30] Former Cal. Rev. & Tax. Code § § 17052.11 (personal income tax) and 23603 (corporate income tax).

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.



According to the ARB, the fee increases are expected to provide around $200 million annually for the three new funds to support the new programs.

as a sales and use tax exemption for "sales of tangible personal property to, or used in or for the construction of, an alternative fuel facility primarily dedicated to the production and processing of ethanol, biodiesel, butanol, and their by-products, when such fuels are derived from biomass materials such as agricultural products, or from animal fats, or the wastes of such products or fats."[34]

The federal government offers various tax incentives, including tax credits for buyers of fuel-cell and hybrid-fuel vehicles, for producers of ethanol, and for the installation of alternative fueling equipment.[35] The U.S. Department of Energy (DOE) maintains a website cataloging various federal and state incentives available for fuel efficiency, and for alternative fuels and vehicles.[36] (See also "Federal Incentives for Renewable and Efficient Energy," accompanying this article.)

State and federal governments continue to consider numerous proposals for tax and nontax incentives to encourage alternative fuel technologies to address climate change concerns, reduce reliance on foreign oil, and promote development of new industries and jobs.

Opportunities and Cautions

Taxpayers are likely to find worthwhile financial incentives to develop or use alternative fuel technologies. Incentives vary in terms of eligibility, amount, and whether they apply to developers or buyers of new technologies. These incentives tend to be available for limited periods, and sometimes for only as long as specified funds are available. Tax incentives also vary in terms of limitations, e.g., utilization based on a taxpayer's income, and restrictions on carryovers or the ability to offset alternative minimum tax. Some incentives, such as California's new ZEV manufacturing equipment sales tax exemption, may involve an application and approval process. Such processes can be beneficial, however; for example, the taxpayer knows up front whether the benefit is available, in contrast to having a credit or refund claim rejected after equipment has already been purchased.

Nontax incentives, such as California's alternative fuel vehicle rebate noted above, can be very beneficial, since they do not depend on a taxpayer's having a tax liability and they might be available immediately upon purchase of the related asset, eliminating need to file a tax return and

[31] Information on available incentives at all levels of California government can be found at www.driveclean.ca.gov/ (the state's "guide to clean and efficient vehicle technologies"). Driveclean.ca.gov is a website of the ARB and, according to the website, was "developed as a resource for car buyers to find clean technology vehicles. The web site is designed to educate Californians of the large difference in pollution levels between vehicles, and the variety of clean vehicle options available today that offer the same performance and luxury features as traditional gasoline vehicles. DriveClean.ca.gov provides educational information on clean advanced technologies, and offers a variety of useful search and comparison tools to help car buyers find the cleanest vehicle that suits their lifestyle."

[32] See *Secondary Benefits of the Zero-Emission Vehicle Program* (Cal. ARB Research Division, August 2000), available on the ARB website at www.arb.ca.gov/msprog/zevprog/2000review/zevbenrd.doc. See also "California's Clean Air Agency" online at www.arb.ca.gov/html/brochure/arb.htm.

[33] Colo. Rev. Stat. § § 39-22-516 (tax credit) and 39-33-102 (rebate).

[34] Ga. Code Ann. § § 48-7-40.16 (tax credit) and 48-8-3(34.4) (sales/use tax exemption).

[35] See, e.g., IRC § § 30B (alternative motor vehicle credit), 30C (alternative fuel vehicle refueling property credit), 40 (alcohol used as fuel credit), 48 (energy credit), and an excise tax credit under IRC § 6426 (credit for alcohol fuel, biodiesel, and alternative fuel mixtures).

[36] See "State & Federal Incentives & Laws," on the Energy Efficiency and Renewable Energy section of the DOE website, at www.eere.energy.gov (click on "Popular Topics: Alternative Fuels" and "Incentives & Laws").

[37] See *Funding for Transportation Programs: Issues and Challenges* (Cal. Legislative Analyst's Office, 4/2/08), available on the LAO website, at www.lao.ca.gov (click on "Subject Areas: Transportation, Business, and Housing"). The LAO is overseen by the California legislature's Joint Legislative Budget Committee, and has been providing fiscal and policy advice to the legislature for more than 65 years. According to its website, the LAO "is known for its fiscal and programmatic expertise and nonpartisan analyses of the state budget. The office serves as the 'eyes and ears' for the Legislature to ensure that the executive branch is implementing legislative policy in a cost efficient and effective manner."

[38] The LAO report, *supra* note 37, suggests, among other things, that California consider (1) increasing the state gas tax, (2) indexing the gas tax for inflation, (3) imposing a similar tax on alternative fuels, and/or (4) imposing mileage-based fees and tolls.

[39] See "U.S. Transportation [Secretary] Mary Peters Announces Steps to Delay Highway Trust Fund Shortfall, Calls on Congress to Pass Legislation to Address Problem" (News Release DOT 128-08, 9/5/08), available on the U.S. Department of Transportation website at www.dot.gov (click on "News").

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

wait for a refund. The existence of both tax and nontax incentives requires businesses and their tax advisors to search beyond the tax law in looking for benefits.

Policy Challenges

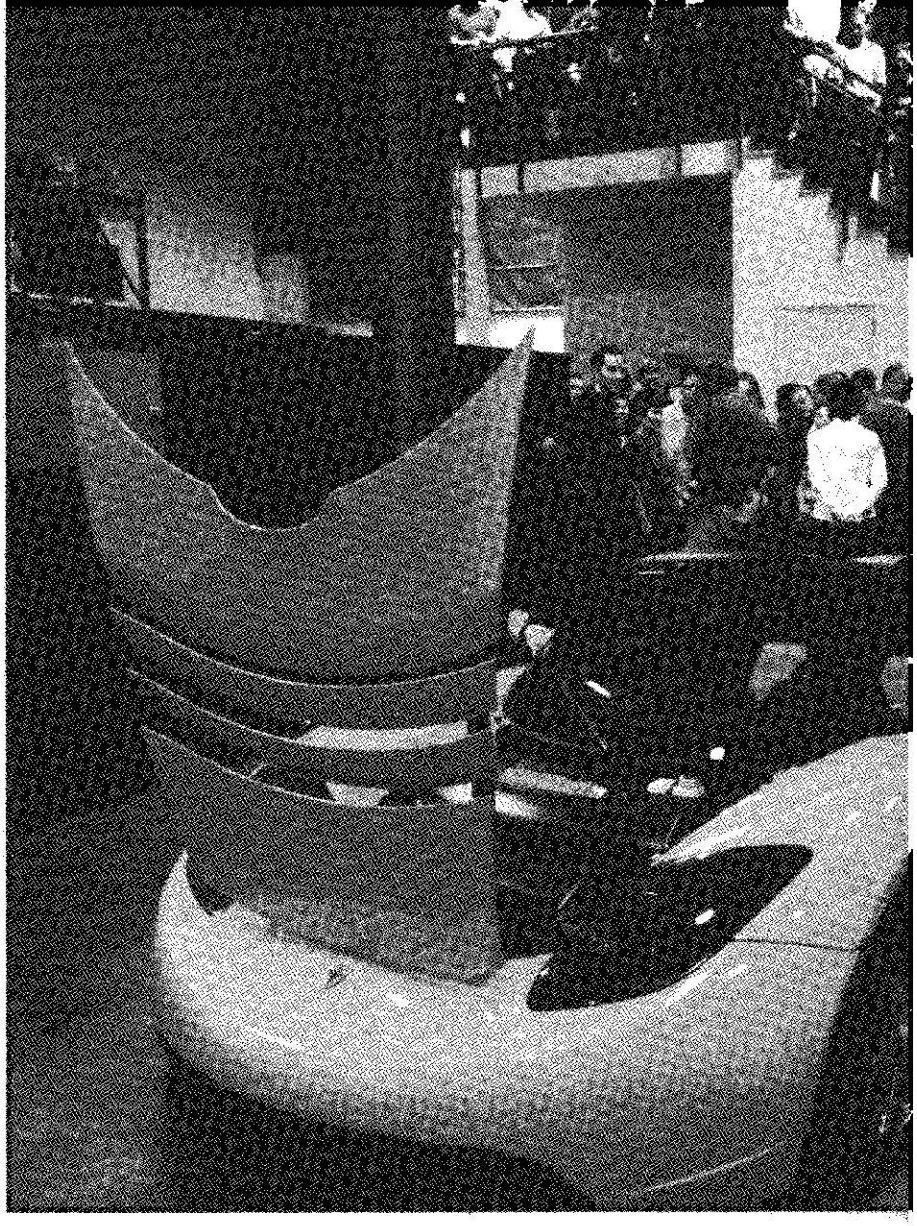
Lawmakers face various challenges in helping to promote the development of alternative fuel vehicles. Among the more significant challenges are the need for funding, understanding the technology involved, and dealing with the decline in gasoline excise tax revenues that accompany greater use of alternative fuel vehicles.

Funding. Lawmakers generally must find ways to fund tax and other financial incentives. California's Alternative and Renewable Fuel, Vehicle Technology, Clean Air, and Carbon Reduction Act of 2007 generates funds for transportation projects through small increases in vehicle license fees. States in which local governments assess sales tax, such as California, may also need to consider the affect of incentives on local funding needs. California's former sales tax exemption for new manufacturers exempted sales tax at the state level only. The exemption under California's new ZEV manufacturing program should apply to both state and local sales taxes. Thus, local governments will want to make sure they reap at least some of the benefits from development of new industries and products or share in the funding that supports the financial incentives. States also will need to consider the effect on local governments of various incentive approaches.

Technology focus. When California began its air quality improvement programs in 1990, it set as its goal the elimination of tailpipe emissions. That technology approach turned out to be too ambitious, and low-emission vehicle standards were added. Policymakers observed that the emissions would still be below what would exist without the revised targets.

When a single technology is employed, or a narrow goal is set, other technologies that might approach or even reach the same goal may not be developed. For example, a focus on ZEV may eliminate consideration of improvements to gas-burning vehicles that increase fuel efficiency or decrease emissions.

Reduced gasoline excise tax revenues. The push for alternative fuel vehicles and improved fuel efficiency will reduce gasoline sales and, thus, reduce gasoline excise tax collections for the federal and state governments. Federal gasoline excise taxes and similar levies in many states are used for highway maintenance and public transit projects. New approaches must be found for maintaining those funds.



California imposes a motor vehicle fuel license tax on gasoline distributors at a rate of 18 cents per gallon. Also, California imposes its sales tax on gasoline prices inclusive of the fuel tax; the revenues from both taxes are used for transportation purposes. The California Legislative Analyst's Office has reported that the state's gasoline tax has not kept pace with the economy and the increased need for highway maintenance and rehabilitation. The per gallon tax, unchanged since 1994, has been eroded by 29% because of inflation and, as a result of the increase in miles traveled on the state's roads, the revenue generated per mile traveled decreased by more than 20% over the past 15 years or so.[37]

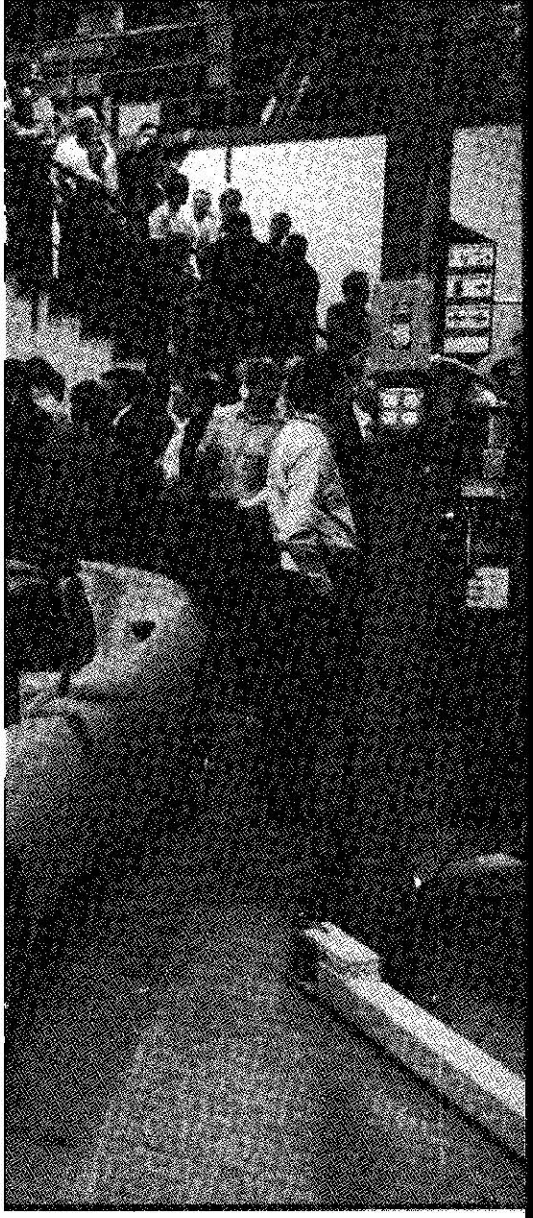
Greater use of alternative fuel vehicles will only exacerbate the current problem. Thus, California (as well as other states) will need to consider ways to modernize funding of road maintenance and public transportation in conjunction with plans to encourage development and commercialization of new alternative fuel vehicles.[38]

Programs supported by the 18 cents per gallon federal gasoline excise tax also suffer from a drop in gasoline sales. In September 2008, the U.S. Department of Transportation urged Congress to pass legislation to cover an $8 billion shortfall in the Highway Trust Fund stemming from reduced gas tax revenues. The Department also called for a new approach due to changes in energy policies and efforts to get taxpayers to use more fuel-efficient vehicles.[39]

Conclusion

Achieving improved air quality and reduced GHG emissions will require new transportation options. Developing new technologies and securing their accept-

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.



ance by consumers and businesses will be expensive. To encourage research, development, and commercialization of new technologies, all levels of government likely will need to continue to create incentives for consumers and industry. Businesses will find many opportunities for moving into new markets created and supported by these incentives.

As California's most recent program for encouraging the manufacture of alternative fuel vehicles demonstrates, these incentives will not necessarily be specific exemptions or credits in the tax code. Various state agencies and funding authorities may instead be able to design and distribute other financial incentives. Practitioners will need to track legislation, such as California's recent Acts promoting clean air, energy efficiency, and new vehicle technology, to determine where financial incentives exist and how they can be obtained. ■

Practice Note:

California Believes in Global Warming

As discussed in the accompanying article, California's new program that offers a sales tax exemption on equipment for manufacturing zero-emission vehicles (ZEVs) is just part of the state's efforts to promote the development and commercialization of new transportation technologies that would, among other things, conserve energy, reduce air pollution, and promote economic development and job creation. This new program, and others that may follow it, are supported by California's Global Warming Solutions Act of 2006 (A.B. 32, 9/27/06; L. 2006, ch. 488), which established specific greenhouse gas emission-reduction goals. In that Act, the state legislature expressed its views on climate change by "find[ing] and declar[ing] all of the following:"

> "(a) Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, ... and other human health-related problems."
>
> "(b) Global warming will have detrimental effects on some of California's largest industries, including agriculture, wine, tourism, skiing, recreational and commercial fishing, and forestry. It will also increase the strain on electricity supplies necessary to meet the demand for summer air-conditioning in the hottest parts of the state."
>
> "(c) California has long been a national and international leader on energy conservation and environmental stewardship efforts, including the areas of air quality protections, energy efficiency requirements, renewable energy standards, natural resource conservation, and greenhouse gas emission standards for passenger vehicles. The program established by this division will continue this tradition of environmental leadership by placing California at the forefront of national and international efforts to reduce emissions of greenhouse gases."
>
> "(d) National and international actions are necessary to fully address the issue of global warming. However, action taken by California to reduce emissions of greenhouse gases will have far-reaching effects by encouraging other states, the federal government, and other countries to act."
>
> "(e) By exercising a global leadership role, California will also position its economy, technology centers, financial institutions, and businesses to benefit from national and international efforts to reduce emissions of greenhouse gases. More importantly, investing in the development of innovative and pioneering technologies will assist California in achieving the 2020 statewide limit on emissions of greenhouse gases established by this division and will provide an opportunity for the state to take a global economic and technological leadership role in reducing emissions of greenhouse gases."

In addition to the views on global warming expressed by a majority of California legislators and the state's governor, a 2008 survey found that 64% of Californians believe that the effects of global warming are already taking place. This is a slightly higher percentage than the nationwide finding of that same belief among 61% of all Americans. (See *Californians and the Environment* (Public Policy Institute of California, July 2008), page 14. This report is available on the PPIC website at www.ppic.org (click on "Policy Areas" and "Environment"). The PPIC, a private nonprofit organization founded in 1994, conducts independent, nonpartisan research on major economic, social, and political issues in order to raise public awareness, and to inform public policy in California.)

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.