# THE BATTLE OVER THE ELECTRIC CAR: THE BIG THREE VS. THE NORTHEASTERN STATES

I.	Introduction	553
II.	THE CLEAN AIR ACT AND THE CALIFORNIA LEV	
	Program	554
III.	THE AUTOMOBILE INDUSTRY'S LEGAL BATTLE	558
	A. New York	558
	B. Massachusetts	
IV.	EPA'S ADOPTION OF THE OTC LEV PLAN	564
V.	THE AUTOMOBILE INDUSTRY'S 49-STATE PLAN	566
VI.	BRIDGING THE GAP	567
	A. Potential Problems	569
	B. Benefits	570
VII.	CONCLUSION	

# I. Introduction

The invention of the automobile has resulted in a fast-paced commuter society, in which mobile vehicles emit unbearable amounts of pollution. Congress passed Title II of the Clean Air Act Amendments of 1990¹ (1990 Amendments) to combat the harmful effects of emissions of carbon monoxide (CO),² hydrocarbons or volatile organic compounds (VOCs), and nitrogen oxides (NO<sub>X</sub>).³ In this remedial effort to clean up our nation's air, the 1990 Amendments designate that motor vehicles manufactured for sale in the United States must be either "federal cars" that meet federal vehicle emission standards set by the Environmental Protection Agency (EPA) or "California cars" that meet California state

<sup>1.</sup> Pub. L. No. 101-549, 104 Stat. 2399 (1990) (codified at 42 U.S.C. §§ 7401-7671(q) (West Supp. II 1990)).

<sup>2.</sup> CO is a pollutant that is emitted directly from vehicle exhausts and is harmful because it prevents the transfer of oxygen to the blood. The Honorable Henry A. Waxman et al., *Cars, Fuels, and Clean Air: A Review of Title II of the Clean Air Act Amendments of 1990,* 21 ENVIL. L. 1947, 1951 (1991).

<sup>3.</sup> The combination of these pollutants in sunlight creates ground level ozone which is a component of urban smog. 60 Fed. Reg. 4712 (1995). Mobile sources produce approximately fifty percent of the United States' VOC emissions and forty-five percent of its NO<sub>X</sub> emissions. The Honorable Henry A. Waxman, *An Overview of the Clean Air Act Amendments of 1990*, 21 ENVIL. L. 1721, 1771 (1991).

standards.<sup>4</sup> This distinction between two types of cars instigated an environmental war fought between the automobile industry and northeastern states over the adoption of California's low emission vehicle program (California LEV) in the Northeast. Although this war has not declared a winner, its harmful effects have forced the automobile industry into a position of responsibility for improving our nation's air quality. This burden has been unfairly borne by the industry because of the transfer of California's environmental solution to the entire Northeast region.

This Comment addresses these issues by examining both the California LEV and the automobile industry's 49-state plan and arguing that a version of the California LEV should not be implemented in the Northeast. Part II provides a general explanation of the Clean Air Act and the California LEV which serve as the impetus for this environmental war. Part III details the automobile manufacturers' mostly unsuccessful litigation in New York and Massachusetts concerning the implementation of the California LEV. The EPA's adoption of the Ozone Transport Commission's plan, the OTC LEV, is discussed in Part IV. In contrast to the OTC LEV, Part V describes the automakers' 49-state plan for reducing emissions nationwide. Part VI discusses the ensuing compromise negotiations and also examines the drawbacks and benefits of the industry's program. Finally, this comment concludes that any compromise should encompass the automakers' plan in lieu of the OTC LEV which could include mandates for zero-emission vehicles.

#### II. THE CLEAN AIR ACT AND THE CALIFORNIA LEV PROGRAM

Title II of the Clean Air Act (Act) regulates the tailpipe emissions from motor vehicles.<sup>5</sup> It establishes automobile emission standards for new vehicles and regulates them until they are sold to the consumer. In the 1990 Amendments, Congress imposed stringent attainment schedules for the national ambient air quality standard (NAAQS).<sup>6</sup> To meet these standards, the 1990 Amendments establish two tiers of tailpipe emission standards for light-duty vehicles or

<sup>4.</sup> See 42 U.S.C. § 7507.

<sup>5.</sup> *Id.* § 7521.

<sup>6.</sup> Title I of the Act directs the EPA Administrator to develop the NAAQS for pollutants. *Id.* § 7408(1)(A). The states are responsible for submitting state implementation plans [hereinafter SIPs] to the EPA which incorporate the NAAQS. *Id.* § 7410. Failure to submit a SIP or obtain approval of a SIP may result in the loss of federal highway funds. *Id.* § 7509(b).

passenger cars.<sup>7</sup> The Tier 1 standards, phased in over the five year period between model years 1994 and 1998, provide for a sixty percent reduction of nitrogen oxides and a thirty-five percent reduction of hydrocarbons.<sup>8</sup> Thereafter, the Tier II emission standards take effect in 2004 and reduce emissions by another fifty percent.<sup>9</sup>

Under the Clean Air Act, the federal government determines the automobile emission standards which preempt the state regulation of emissions. However, this Act also provides that California is exempted from this requirement under certain circumstances. As a result of this special exemption, states which desire more stringent emission standards than the Tier 1 requirements are permitted under section 177 of the Act to adopt the California state regulations in lieu of the federal standards. In order to implement the stricter California standards, the state must adopt standards that are identical to those of California. The regulations must also be adopted by California and the state at least two years before the model year in which the state imposes the regulations. Furthermore, the EPA must have also granted a waiver of preemption based on a finding that the California emission standards will be "in the aggregate, at

Ιd

<sup>7.</sup> *Id.* §§ 7521(g), (h), (i). The emission standards apply to a vehicle based on its weight, use classification, and model year. *Id.* §§ 7521, 7541.

<sup>8.</sup> Waxman, supra note 2, at 1957.

<sup>9.</sup> *Id.* at 1958. Section 202(i) establishes the Tier II standards which consist of (in grams per mile): 0.125 g/mi for hydrocarbons, 1.7 g/mi for carbon monoxide and 0.2 g/mi for nitrogen oxides. 42 U.S.C. § 7521(i). However, these standards will not automatically take effect if the EPA determines in a report given to Congress by June 1, 1987 that they are not necessary, cost-effective, or technically possible. *Id.* 

<sup>10. 42</sup> U.S.C. § 7543(a). This section states:

No State or any political subdivision thereof shall adopt or attempt to enforce any standard relating to the control of emissions from new motor vehicles or new motor vehicle engines subject to this part. No State shall require certification, inspection, or any other approval relating to the control of emissions from any new motor vehicle or new motor vehicle engine as condition precedent to the initial retail sale, titling (if any), or registration of such motor vehicle, motor vehicle engine, or equipment.

<sup>11.</sup> California is exempt because it began regulating automobile emissions before March 30, 1966 to combat the smog problem in the Los Angeles basin. *Id.* § 7543(b)(1).

<sup>12.</sup> Id. § 7507.

<sup>13.</sup> *Id*.

<sup>14.</sup> Id.

least as protective of public health and welfare as applicable Federal standards."15

The 1990 Amendments further restricted section 177 by prohibiting the adopting state from limiting the sale of the California car in the state or from "take[ing] any action of any kind to create, or have the effect of creating, a motor vehicle or motor vehicle engine different than a motor vehicle or engine certified in California under California standards (a 'third vehicle') or otherwise create such a 'third vehicle.'"<sup>16</sup> The purpose of this restriction is to relieve the automobile industry from the undue burden of producing different vehicles which conform to each individual state's standards.

California took advantage of its special exemption status when the California Air Resources Board (CARB) developed its low emission vehicle program. To supplement its more stringent standards, California developed a schedule of vehicles to be phased in over the next decade. Specifically, California's program establishes five categories of vehicles to each of which a stricter emission standard applies. Manufacturers must only meet a fleet average requirement for emissions which declines from model year 1994 to 2003. Therefore, the manufacturers can decide how many vehicles in each category they produce and sell in order to comply with the fleet average.

The most controversial part of the California LEV which has enraged the automakers is the sales mandate imposed for the category of

17. The California legislature directed CARB to adopt a plan with motor vehicle controls, vehicle fuel restrictions, and in-use vehicle controls so as to achieve a fifty-five percent reduction in emissions by December 31, 2000. CAL HEALTH & SAFETY CODE §§ 43018(b), (c) (Deering 1995).

\_

<sup>15.</sup> *Id.* A waiver of preemption will not be granted if the Administrator finds that the determination of the state is arbitrary and capricious, the state does not need such state standards to meet compelling or ordinary conditions, or such state standards and enforcement procedures are not consistent with section 7521(a). *Id.* § 7543(b).

<sup>16.</sup> Id. § 7543(b)(1).

<sup>18.</sup> These categories are (1) California Tier I Vehicles, (2) Transitional Low-Emission Vehicles (TLEVs), (3) Low-Emission Vehicles (LEVs), (4) Ultra-Low Emission Vehicles (ULEVs), and (5) Zero-Emission Vehicles (ZEVs). The applicable standards for nonmethane organic gases (NMOG) in grams per mile are: TLEV: 0.25 g/mi; LEV: 0.125 g/mi; ULEV: 0.075 g/mi. CAL CODE REGS. tit. 13, § 1960.1(g)(1) (1991).

<sup>19.</sup> The fleet average requirement is the average emissions from the mix of vehicles produced by a given manufacturer in a given year. See id. § 1960.1(g)(2). This fleet average requirement declines from 0.250 g/mi of NMOG in 1994 to 0.062 g/mi of NMOG in 2003. Id.

<sup>20.</sup> Id

zero-emission vehicles (ZEVs).<sup>21</sup> This sales mandate dictates that by 1998, two percent of all vehicles for sale in California must be ZEVs.<sup>22</sup> This rate increases to five percent in 2001 and ten percent in 2003.<sup>23</sup> Although this quota is initially only instituted against those manufacturers who sell over 35,000 light and medium-duty vehicles in California, this number plummets to just 3,000 vehicles in 2003.<sup>24</sup>

The California program also consists of a clean fuels requirement which introduces cleaner gasoline into the state in two stages.<sup>25</sup> This reformulated gasoline contains a lower sulfur content than the gasoline sold in the rest of the United States. While Phase I gasoline was instituted in California as of January 1, 1992, Phase II does not become effective until March 1, 1996.<sup>26</sup> This requirement of cleaner fuels gives automobile manufacturers more ways to meet the LEV emission standards through the certification process.<sup>27</sup>

To date, Massachusetts and New York are the only two northeastern states which have approved the California LEV plan, as well as the controversial ZEV mandate. Neither state has adopted California's clean fuels program. However, New York and Massachusetts' implementation of the LEV program did not occur without a strong legal fight between the states and the automobile industry. The high stakes of this intensive battle would result in the winner attaining cleaner air while the loser would bear the responsibility of cleaning it up.

27. Certification is a two-step process which tests vehicles from each model year. First, vehicles are tested prior to sale to determine whether they comply with the emission standard for its "useful life." Second, these vehicles are also tested after they have been sold to the public to ensure compliance. See 42 U.S.C. §§ 7525, 7541.

<sup>21.</sup> ZEVs are vehicles that emit no exhaust or evaporative emissions of any kind. They are commonly referred to as electric cars.

<sup>22.</sup> CAL. CODE REGS. tit. 13, § 1960.1(g)(2). This equates to 40,000 vehicles. David B. Rivkin, Jr., *The U.S. "Clean" Fuels Program: Imperatives and Prospects*, 28 CAL. W. L. REV., 95, 102 n.26 (1991/1992).

<sup>23.</sup> CAL. CODE REGS. tit. 13,  $\S$  1960.1(g)(2). This equates to approximately 200,000 vehicles. Rivkin, supra note 22.

<sup>24.</sup> CAL. CODE REGS. tit. 13, § 1960.1(g)(2).

<sup>25.</sup> Id. §§ 2300-2317.

<sup>26.</sup> *Id*.

#### III. THE AUTOMOBILE INDUSTRY'S LEGAL BATTLE

# A. New York

New York adopted California's LEV plan on May 28, 1992<sup>28</sup> and the auto industry subsequently initiated a vehement legal attack. The Motor Vehicle Manufacturers Association of the United States and the Association of International Automobile Manufacturers, Inc. (the manufacturers) filed suit against the New York Department of Environmental Conservation (DEC) and the Commissioner of Environmental Conservation as a result of New York's implementation of California's automobile emissions standards.<sup>29</sup>

The manufacturers contended that the New York regulations violated the "identicality" requirement of section 177 of the Act because the DEC did not adopt the clean fuels program along with the LEV program.<sup>30</sup> The district court ruled that this was not a violation of section 177 because New York's new emissions standards must only be identical to the program for which California has received a section 209(b) waiver.<sup>31</sup> The court reasoned that since California's clean fuels program was subject to a section 211 waiver,<sup>32</sup> Congress separately preempted the control of emissions and fuels so that they would be treated differently.<sup>33</sup> Therefore, Congress' intention was to allow other states to adopt only those California standards which had been considered by the EPA through the section 209(b) waiver process.<sup>34</sup>

28. These regulations were amendments to 6 N.Y.C.R.R. part 218 (1992).

<sup>29.</sup> Motor Vehicle Mfrs. Ass'n of the United States, Inc. v. New York State Dep't of Envtl. Conservation, 810 F. Supp. 1331 (N.D.N.Y. 1993) [hereinafter MVMA I].

<sup>30.</sup> *Id.* at 1342. Section 177 provides that states may implement their own model year automobile emission standards only if those standards are "identical to the California standards for which a waiver has been granted for such model year . . . ." 42 U.S.C. § 7507(1).

<sup>31.</sup> *MVMA I*, 810 F. Supp. at 1343. California's waiver application which was submitted to the EPA in October 1991 did not include the clean fuels program. *Id.* at 1342.

<sup>32.</sup> *Id.* at 1343. Section 211 allows states to regulate fuels differently than the EPA if they demonstrate that the regulation is necessary to meet air quality standards. 42 U.S.C. § 7545. However, California may regulate fuel without such a showing. Section 211(c)(4)(B) specifically directs that "[a]ny State for which application of section [209(a)] has at any time been waived under section [209(b)] may at any time prescribe and enforce, for the purpose of motor vehicle emission control, a control or prohibition respecting any fuel or fuel additive." *Id.* § 7545(c)(4)(B).

<sup>33.</sup> MVMA I, 810 F. Supp. at 1343. If states were forced to adopt California's fuel standards to meet section 177 requirements, they would also have to make this showing under section 211 for the fuel requirements. This would contradict Congress' separation of the vehicle and fuel requirements as indicated by the separate waivers. 60 Fed. Reg. 4712, 4727 (1995).

<sup>34.</sup> MVMA I, 810 F. Supp. at 1343.

The court also rejected the manufacturers' claims that the DEC violated section 177 by adopting California standards that had not yet been granted a federal waiver.<sup>35</sup> The court disagreed with the manufacturers' interpretation that New York's adoption of the standards was premature because California's waiver had not yet been granted.<sup>36</sup> According to the court, the language of the statute allows a state to adopt but not enforce standards until the waiver has been granted.<sup>37</sup> Any other interpretation would not promote the statute's goal of allowing states to regulate emissions.

Despite these losses at the district court level, the manufacturers were successful in part. The district court judge ruled that New York's regulations violated the Clean Air Act by placing an "undue burden" on automakers.<sup>38</sup> Because New York's plan did not include standards for use of cleaner gasoline as in California, the judge determined that the auto industry would be forced to design a separate vehicle that would operate on the high sulfur fuels in New York.<sup>39</sup> This would have violated the third vehicle prohibition in section 177 because a third car would be created by differences in the securing of the catalytic converter.<sup>40</sup>

On the most controversial element of the California plan, the ZEV mandate, the district court supported the manufacturers' complaints. The court ruled that the ZEV sales mandate would actually limit the sales of California-certified vehicles in violation of section 177.<sup>41</sup> Furthermore, because of the differences in the weather conditions and the retail market between California and New York, the court agreed with the industry that the ZEV mandate would require the production of a third vehicle in violation of section 177.<sup>42</sup>

Finally, the district court held that the adoption of the California standards on May 28, 1992, was not "at least two years before the

<sup>35.</sup> *Id.* at 1347.

<sup>36.</sup> Id.

<sup>37.</sup> Id.

<sup>38.</sup> Id. at 1344.

<sup>39.</sup> Id. at 1345.

<sup>40.</sup> New York's vehicles would require a converter that was bolted and therefore, replaceable because of the higher sulfur content. On the other hand, California would utilize a welded converter because it would not need frequent replacement. *Id.* at 1344-45.

<sup>41.</sup> The court reasoned that by mandating a certain percentage of ZEVs to be sold, the DEC was actually limiting the sale of non-ZEV vehicles. *Id.* at 1346.

<sup>42.</sup> The auto manufacturers contended that because of the colder climate in New York, the vehicle's design would have to be modified to include a heating system in order to appeal to the local market. *Id*.

commencement of the model year."43 Therefore, because the DEC did not meet the two year leadtime requirement, these standards could not be enforced in the 1995 model year.<sup>44</sup> This ruling reinforced the protection provided to the automobile industry so that it had time to adjust to the upcoming regulations. However, from another perspective it was of little benefit because the court simply delayed the inevitable implementation of the California standards in New York state.

Although this decision is noteworthy because it shielded the automobile industry from the ZEV mandate, the manufacturers' legal protection was only temporary. The district court judge vacated his earlier holding that the DEC regulations violated the "undue burdens" and "third vehicle" prohibitions of section 177.45 The court also modified its original opinion to account for the fact that different automobile manufacturers' model years begin at different times. As a result, New York's failure to provide the two year leadtime to a particular manufacturer did not invalidate the standards.<sup>46</sup> Instead, the court ruled that "it merely renders them unenforceable against those manufacturers which were not given the requisite two-years notice."47 Essentially, this decision lifted the prohibition on New York's implementation of the California LEV program and shifted the burden of cleaning up our nation's air back to the automobile industry.

The manufacturers' hopes that New York's adoption of the California plan would be prohibited were further destroyed on appeal. A Second Circuit Court of Appeals decision unfavorably addressed the issues of identicality and the ZEV sales quota.<sup>48</sup> On the issue of identicality, the court affirmed the district court's ruling that the DEC's failure to adopt California's clean fuels plan along with their low

<sup>43.</sup> *Id.* at 1348 (quoting 42 U.S.C. § 7507(2)).

<sup>44.</sup> Id.

<sup>45.</sup> Motor Vehicle Mfrs. Ass'n of the United States, Inc. v. New York State Dep't of Envtl. Conservation, 831 F. Supp. 57, 61 (N.D.N.Y. 1993) [hereinafter MVMA II]. In this decision, the district court found that material questions of fact remained as to whether the New York fuel content would force manufacturers to redesign the emissions system for California cars so they could operate in New York, thus requiring a third vehicle in violation of section 177. Id. at 60. As a result, this issue was sent to trial. See Motor Vehicle Mfrs. Ass'n of the United States, Inc. v. New York State Dep't of Envtl. Conservation, 869 F. Supp. 1012 (N.D.N.Y. 1994) [hereinafter MVMA III].

<sup>46.</sup> MVMA II, 831 F. Supp. at 64.

<sup>47.</sup> Id.

<sup>48.</sup> Motor Vehicle Mfrs. Ass'n of the United States, Inc. v. New York State Dep't of Envtl. Conservation, 17 F.3d 521 (2d Cir. 1994) [hereinafter MVMA IV].

emissions standards did not violate the Act's requirement that state emission standards be identical to California standards.<sup>49</sup> The court stated that "the plain language of § 177 not only provides that New York need not adopt California's [clean fuels] plan, it actually precludes New York's adoption of such plan under this provision, as the plan was not part of the waiver application."<sup>50</sup>

On the issue of the ZEV mandate, the court ruled that New York's ZEV requirement did not limit sales of other classes of California-certified vehicles so as to violate section 177. The court reasoned that the "purpose of the sales limitation prohibition is to prohibit § 177 opt-in states from attempting to regulate against the sale of a particular type, not number, of California-certified cars." Furthermore, the Second Circuit ruled that the ZEV quota would not cause production of a third vehicle. The court found that the addition of bigger heaters did not represent a major design change as envisioned by Congress in creating the third car prohibition. In reversing summary judgment for the manufacturers, the court stated that whatever design change "manufacturers choose to install on cars sold in New York is a marketing choice of theirs and not a requirement imposed by the [state]."

The Second Circuit also remonstrated the industry for arguing that the sales mandate was unfair because the viable technology was not yet available. The Second Circuit stated:

No doubt as a result of the technology forcing nature of the Clean Air Act, today's automobile as we know it is passing away. But the manufacturers' argument with respect to the difficulty of building a viable ZEV is reminiscent of the view that 100 years ago some thought that the U.S. patent office should be closed because anything that ever could be invented had already been invented.<sup>55</sup>

<sup>49.</sup> Id. at 532.

<sup>50.</sup> *Id. See also* Motor & Equip. Mfrs. Ass'n, Inc. v. EPA, 627 F.2d 1095 (D.C. Cir. 1979), *cert. denied*, 446 U.S. 952 (1980) (holding that the plain meaning of section 209 of the Clean Air Act demonstrates Congress' intent to make waiver power coextensive with preemption provision).

<sup>51.</sup> MVMA IV, 17 F.3d at 536.

<sup>52.</sup> *Id.* at 537.

<sup>53.</sup> *Id.* at 538.

<sup>54.</sup> *Id.* 

<sup>55.</sup> Id.

This harsh language demonstrates the court's view that the automobile industry should bear the responsibility for producing the ZEV. By taking this position, the court ignored the implications of prematurely forcing the ZEV onto the marketplace.<sup>56</sup>

The automobile manufacturers scored a moderate victory when the Second Circuit affirmed the requirement that New York delay the starting date of its LEV program.<sup>57</sup> With this ruling the court also adopted a favorable interpretation from the manufacturer's perspective of the term "model year." The appellate court decided that "model year" would apply on an industry-wide basis.<sup>58</sup>

The auto manufacturers' lost their final opportunity to prevent New York's adoption of the California LEV program. A federal district court unfavorably revisited the allegation that New York's failure to adopt California's clean fuels plan required redesign of the California vehicle's exhaust system because of New York's higher sulfur fuel content.<sup>59</sup> The court held that "having adopted the California standards identically, New York's failure to adopt the [clean fuel] program cannot, standing alone, be characterized as an act forcing the creation of a third-vehicle."<sup>60</sup> The court further stated that it was not New York which required the manufacturers to redesign their emission systems, but the manufacturers who chose to base their designs on California's clean fuels.<sup>61</sup> Therefore, New York's adoption of the California LEV program was not a violation of the third car prohibition in section 177.<sup>62</sup>

#### B. Massachusetts

Besides New York, the automobile manufacturers also brought Massachusetts into a legal battle as it was the other northeastern state to implement California's LEV program.<sup>63</sup> The auto manufacturers filed an action in the District Court of Massachusetts alleging that the

<sup>56.</sup> See infra part VI.B.

<sup>57.</sup> *MVMA IV*, 17 F.3d at 535.

<sup>58.</sup> *Id.* The court rejected interpretations that the term "model year" should apply on an engine family or individual manufacturer basis. *Id.* The court based its decision on the lack of promulgated EPA regulations and the fleet averaging plan for the LEV program. *Id.* 

<sup>59.</sup> MVMA III, 869 F. Supp. 1012 (N.D.N.Y. 1994).

<sup>60.</sup> Id. at 1016.

<sup>61.</sup> Id. at 1020.

<sup>62.</sup> *Id*.

<sup>63.</sup> Massachusetts promulgated its regulations on January 31, 1992, adopting the California LEV program without the clean fuel plan. See MASS. REGS. CODE tit. 310, § 7.40 (1992).

Department of Environmental Protection's (DEP) rules were preempted by the Clean Air Act because the DEP did not comply with section 177.<sup>64</sup> The court denied the automobile manufacturers' request for a preliminary injunction prohibiting the DEP from instituting new motor vehicle tailpipe emission regulations.<sup>65</sup>

In light of the Second Circuit's mostly unsupportive ruling, the automobile manufacturers abandoned their claims on appeal to the First Circuit except to the leadtime issue.<sup>66</sup> The First Circuit declined to follow the Second Circuit's decision that the leadtime requirement applied industry-wide.<sup>67</sup> Therefore, the First Circuit held that the district court did not abuse its discretion in refusing to issue a preliminary injunction enjoining the 1995 standards.<sup>68</sup>

With this decision, Massachusetts joined New York in gaining full legal support for implementing the California LEV program. As a result, both states could reap the benefits of cleaner air while the automobile industry worked relentlessly to comply with these court rulings.

<sup>64.</sup> American Auto. Mfrs. Ass'n v. Greenbaum, No. CIV.A.93-10799-MA, 1993 WL 443946 (D. Mass. Oct. 27, 1993). This case was similar to the New York litigation because the automakers argued that (1) the regulations were not identical because Massachusetts had not adopted the California clean fuel requirement, (2) the regulations forced manufacturers to create a third vehicle because of the higher sulfur content in Massachusetts gasoline, (3) the regulations were adopted by the DEP before the EPA granted California a section 209(b) waiver, and (4) the DEP could not apply the regulations to 1995 cars because the manufacturers were entitled to two years prior notice. *Id.* at \*1.

<sup>65.</sup> Id. at \*10.

<sup>66.</sup> American Auto. Mfrs. Ass'n v. Massachusetts Dept. of Envtl. Protection, 31 F.3d 18 (1st Cir. 1994).

<sup>67.</sup> *Id.* at 24. The First Circuit reasoned that Massachusetts differed from New York and California which use fleet average requirements to set the mix of vehicles to be sold. *Id.* Such an interpretation would be conducive to an industry-wide commencement date because splitting the year would complicate the fleet averaging plan. *Id.* Furthermore, based upon the assumption that EPA's interpretation of the term "model year" provides a regulatory definition of "model year" for section 177 purposes, the court held that the leadtime requirement was satisfied because it could apply to an engine family. *Id.* at 25.

The debate surrounding the definition of "model year" was addressed by the EPA in its final rule issued January 24, 1995. *See* 60 Fed. Reg. 4712 (1995). Under this regulation, a motor vehicle's model year will be determined "on an engine family basis for specific models within engine families, depending upon the date the first model in the engine family commences production." *Id.* at 4732.

<sup>68.</sup> American Auto. Mfrs. Ass'n, 31 F.3d at 28.

#### IV. EPA'S ADOPTION OF THE OTC LEV PLAN

The automobile industry's loss extends beyond the state borders of California, New York and Massachusetts because the California LEV has the potential of becoming a regional program in the Northeast. The Clean Air Act directs that the Northeast Ozone Transport Region (OTR) must bring nonattainment areas in the OTR into attainment of the national ambient air quality standard for smog.<sup>69</sup> To establish this objective, the Northeast Ozone Transport Commission (OTC) recommended its plan, the OTC LEV, to the EPA in February 1994. The OTC LEV suggests that all northeastern states adopt a modified California LEV plan to reduce pollution.

The OTC plan applies to all 1999 and subsequent model year passenger cars and light-duty trucks.<sup>70</sup> These vehicles cannot be sold, imported, delivered, purchased, leased, rented, acquired, received, or even registered in the OTR unless they have received a certification from the CARB.<sup>71</sup> Each state must allow for the sale of California's Tier I, TLEV, LEV, ULEV, and ZEV vehicles in that state.<sup>72</sup> The emission standards must be identical to those in California and all states must adopt California's nonmethane organic gas (NMOG) fleet average requirements.<sup>73</sup> The OTC LEV plan allows manufacturers to choose any combination of California-certified vehicles to meet the average fleet emission standards in the OTR.<sup>74</sup> Although, the OTC LEV does not contain a mandate for ZEVs, individual states can decide to include such a requirement as well as economic incentives to increase the sale of ZEVs.<sup>75</sup> In order for the OTC LEV plan to be enforced, a majority of

<sup>69.</sup> The OTR program is designed to handle regional ozone pollution problems that result from emissions over a broad area. 42 U.S.C. § 7506a(a). The OTR was established by operation of law under section 184 of the Clean Air Act and is comprised of Connecticut, Delaware, Maine, Massachusetts, Maryland, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, the District of Columbia, and the portion of Virginia which is within the Consolidated Metropolitan Statistical Area. *Id.* § 7511c(a).

<sup>70. 60</sup> Fed. Reg. 4712, 4731 (1995).

<sup>71.</sup> *Id*.

<sup>72.</sup> Id

<sup>73.</sup> *Id.* The fleet averages for model years in grams per mile are: 1999—0.113 g/mi; 2000—0.073 g/mi; 2001—0.070 g/mi; 2002—0.068 g/mi; 2003—0.062 g/mi. *Id.* at 4731 n.28.

<sup>74.</sup> *Id.* at 4731.

<sup>75.</sup> *Id.* California has considered offering a number of economic incentives. These include a federal income tax credit, reduced electric rates for home charging of the battery, and a free battery change after 30,000 miles. *See* 139 Cong. Rec. S16,854-01 (daily ed. Nov. 20, 1993) (statement of Sen. Boxer).

states in the OTR must approve it, and then the others would be required to participate.<sup>76</sup>

On January 24, 1995, the EPA officially endorsed the OTC LEV plan.<sup>77</sup> The most controversial aspect of this endorsement is the ZEV production mandate. Despite the EPA's adoption of the OTC LEV program, states in the OTR are not required to implement California's ZEV production mandate.<sup>78</sup> According to the EPA, section 177 allows states to adopt the California LEV program without the mandate.<sup>79</sup> The EPA concluded that the ZEV mandate was not required to meet the identical standards provision under section 177, regardless of whether or not the mandate was a standard relating to the control of emissions.<sup>80</sup> Section 177 does not require adoption of all California standards for a model year. Rather, it requires that if a state adopts motor vehicle standards, they must be identical to California's standards.<sup>81</sup> The EPA concluded that the ZEV production mandate and the LEV requirements could be separated so that the ZEV mandate is not required for the enforcement of the LEV program.<sup>82</sup> Although the EPA and the OTR states appear to be evenhandedly not requiring the mandate, the automobile industry remains subject to the whim of the states. Each state

Unless an acceptable LEV-equivalent program is in effect, . . . the OTC LEV program [is] necessary to achieve timely attainment (including maintenance) in certain nonattainment areas and . . . each OTC state [must] cure the inadequacy within one year by adoption of the OTC LEV program and submission of it as a SIP revision.

<sup>76.</sup> Four states, Virginia, Delaware, New Jersey and New Hampshire voted against the OTC petition to bring the California LEV program to the Northeast. *Air Pollution: Northeast States Vote to Recommend EPA Impose California Standards on Them*, Cal. Env't Daily (BNA), at D-2 (Feb. 3, 1994).

<sup>77.</sup> In its final rule, the EPA stated:

<sup>60</sup> Fed. Reg. 4712, 4716 (1995). This adoption indicated that each of the states in the OTR had SIPs which were inadequate to achieve emissions reductions. The EPA has projected that without adoption of a program in the Northeast, motor vehicles will account for 38% of NO<sub>X</sub> and 22% of VOC emissions in 2005. *Id.* at 4713. *See also* 42 U.S.C. § 7410.

<sup>78. 60</sup> Fed. Reg. 4712, 4716 (1995).

<sup>79.</sup> Id

<sup>80.</sup> *Id.* The EPA left unresolved whether or not the mandate is an emission standard. An "emission standard" or "emission limitation" is defined as "a requirement ... which limits the quality, rate, or concentration of emissions of air pollutants on a continuous basis, including any requirement relating to the operation or maintenance of a source to assure continuous emission reduction . . . ." 42 U.S.C. § 7602(k).

<sup>81. 60</sup> Fed. Reg. 4712, 4729 (1995).

<sup>82.</sup> *Id.* The EPA believes that individual emissions standards may be adopted as long as section 177's "third car" and "sales limitation" requirements are not violated by excluding a standard. *Id.* 

still possesses the ultimate power to incorporate the mandate as a part of its program.

# V. THE AUTOMOBILE INDUSTRY'S 49-STATE PLAN

Having lost its legal battle, the American Automobile Manufacturers Association (AAMA) developed a comprehensible plan to prevent the adoption of the California LEV, as well as its ZEV mandate, throughout the entire Northeast region. The EPA's adoption of the OTC LEV plan was not a total defeat for the automobile industry because the EPA strongly recommended the plan developed by the automobile manufacturers.<sup>83</sup> "The (industry-sponsored) plan still being discussed by all parties would be more cost-effective and would benefit public health across the nation. It would enable the auto industry to market a cleaner car throughout the nation—not simply in the OTC states and California."<sup>84</sup>

This alternative program, the 49-state plan or the Federal LEV (Fed LEV), applies to every state except California and would be implemented in two stages. First, this plan achieves the same or greater emissions reductions by the earlier introduction of TLEVs than under the OTC LEV plan. Beginning in 1999, each manufacturer must sell a mix of LEVs and other vehicles in the OTR that would achieve the same or greater emissions reductions as the group of vehicles that would have been sold under the OTC LEV plan. This part of the program requires the sale of vehicles certified to the California LEV standards and also utilizes California's test procedures and fuels. Vehicles not certified to

<sup>83.</sup> The EPA was forced to adopt the OTC LEV plan despite its preference for the 49-state plan. The OTC submitted its plan in February 1994, requiring the EPA to take action within 180 days. The EPA was also threatened with lawsuits by environmentalists when it missed the first November deadline for ruling on the OTC LEV. Furthermore, the states were also pressuring the EPA because they had to meet deadlines for their SIPs or face sanctions. *Northeast Gets EPA Nod for Clean Car Plan*, 7 Env't Wk. (King Comm. Group) No. 50 (Dec. 22, 1994).

<sup>84.</sup> *Id.* (quoting EPA Administrator, Carol Browner). The EPA is promoting further negotiations by allowing states one year from February 15, 1995, to submit their SIP revisions. This action gives the states more time to discuss an alternative plan before having to engage in regulatory and legislative activity to adopt the OTC LEV plan.

<sup>85. 60</sup> Fed. Reg. 4712, 4713 (1995). The phase-in schedule for these vehicles in the model year is: 40% TLEVs in 1997-2000; 30% LEVs in 1999; 60% LEVs in 2000 and 100% LEVs in 2001. *Id.* at 4714.

<sup>86. 59</sup> Fed. Reg. 53,396, 53,398 (1994).

<sup>87.</sup> *Id.* These standards in grams per mile are: At 50,000 miles: 0.075 NMOG, 3.4 CO, 0.2 NOx; At 100,000 miles: 0.090 NMOG, 4.2 CO, 0.3 NOx. *Id.* 

the LEV levels are required to meet the California Tier I, TLEV, ULEV or ZEV levels.<sup>88</sup>

Second, under the 49-state plan, all cars and light-duty trucks sold outside of California in the model year of 2001 must meet the California LEV standard as opposed to 2004 under the OTC LEV plan.<sup>89</sup> These vehicles would possess up to sixty-six percent lower in-use VOC and seventy-three percent lower in-use NOx tailpipe emissions than Tier I vehicles.<sup>90</sup> Therefore, cleaner cars would be available to the entire nation three years earlier.

The 49-state plan does not require vehicles to use gasoline that is only available in California. All vehicles to be sold nationwide still must possess the California LEV onboard diagnostic controls and pass the high emission standards of LEVs operated on California's cleaner Phase II gasoline. However, because not all cars in the nation would be operated on the cleaner California fuel, the industry's plan requires some necessary adjustments for the higher level sulfur fuel which most cars utilize. 93

#### VI. Bridging the Gap

Two plans to solve the same problem indicate that a compromise is necessary. The EPA whole-heartedly supports cleaner cars throughout the entire nation, as opposed to just in the Northeast region and one west coast state, which indicates its partisanship towards the 49-state plan. On the other hand, the EPA also wants to ensure the advancement of future technology which is supported by the ZEV sales mandate. By recommending that the two sides continue negotiations, the EPA has remained neutral with hope that a middle ground will be

89. *Id.* Section 202(1)(b)(C) prohibits the Administrator from changing the Tier I standards specified in sections 202(g), (h), and (i) before model year 2004. *Id.* 

<sup>88.</sup> Id.

<sup>90. 60</sup> Fed. Reg. 4712, 4714 (1995).

<sup>91. 59</sup> Fed. Reg. 53,396, 53,399 (1994).

<sup>92.</sup> *Id.* at 53,398-99. These onboard diagnostics are computers in the vehicle that monitor the emission systems and alert the driver if there is an emissions problem. *Air Pollution: Automakers Assert LEV Plan for 49 States Would Achieve Ozone Reductions in Northeast*, 25 [Current Developments] Env't Rep. (BNA) 1149 (Oct. 7, 1994). Use of reformulated gasoline is required under the Clean Air Act for the nine worst nonattainment areas. *Id.* 

<sup>93. 59</sup> Fed. Reg. 53,396, 53,399 (1994). Adjustments are necessary because vehicles operating on high sulfur fuels will not satisfy in-use compliance tests or the inspection/maintenance cutpoints set at 1.5 times the LEV certification standards. The malfunction indicator lights of these vehicles will also falsely illuminate. *Id.* 

reached. But one point is crystal clear—the automakers vehemently oppose any type of mandate, no matter how small.<sup>94</sup>

The EPA, in an effort to create a compromise, hired the Keystone Center to facilitate negotiations.<sup>95</sup> The result has produced an Advanced Technology Vehicle (ATV) component for an alternative to the OTC LEV plan.<sup>96</sup> This requires a group effort by auto manufacturers, utilities, and state and federal governments to work together to advance technology and to control motor vehicle emissions.<sup>97</sup> The strategy would be to introduce these vehicles into the federal fleet market.<sup>98</sup> At first there would be increased purchases of alternative fuel vehicles by federal agencies, state governments, and oil companies as required by the Energy Policy Act of 1992.99 During this time frame, 1996-1998, the infrastructure would be developed and incentive programs would be implemented.<sup>100</sup> Furthermore, surveys would be conducted to approximate the demand of private and municipal fleets.<sup>101</sup> In 1999-2001, the state and automakers would work together to boost municipal and private fleet purchases through incentives. 102 Infrastructure would continue to expand and surveys would be conducted to determine the future retail demand of consumers. 103 Finally, if the requisite

[T]he Energy and Policy Act of 1992 (EPACT) requires [f]ederal, [s]tate and alternative fuel provider fleets to acquire increasing percentages of alternatively fueled vehicles. The Department of Energy is in the process of initiating a rulemaking, as required by EPACT, to determine if private fleets should also be required to purchase certain percentages of alternatively fueled vehicles as part of their new fleet acquisitions.

<sup>94.</sup> In a compromise offer by the states, the industry refused to accept a one percent ZEV mandate along with a fifty percent reduction in the required number of ULEVs. *Is Car Compromise in the Works for Northeast?*, 42 Env't Wk. (King Comm. Group) No. 7 (Oct. 27, 1994). One car industry official summed up the industry's position quite succinctly: "We don't like production mandates and we don't like being forced to make zero emission vehicles." *Air Pollution: Draft Framework on OTC LEV Talks Shows Little Agreement on Tough Issues Reached*, 1995 [News] Daily Env't Rep. (BNA) No. 23, at D-16 (Feb. 3, 1995).

<sup>95.</sup> Air Pollution: Federal Vehicle Fleet Purchases Central to More ULEVs, ZEVs, Draft Says, Cal. Env't. Daily (BNA) at D-2 (Dec. 9, 1994).

<sup>96. 60</sup> Fed. Reg. 4720, 4734 (1995).

<sup>97.</sup> *Id*.

<sup>98.</sup> Id.

<sup>99.</sup> *Id*.

<sup>59</sup> Fed. Reg. 49,901, 49,902 (1994).

<sup>100. 60</sup> Fed. Reg. 4712, 4735 (1995).

<sup>101.</sup> Id.

<sup>102.</sup> Id.

<sup>103.</sup> Id.

infrastructure has been developed, alternative fuel vehicles would be ready for public sales between 2002 and 2004.<sup>104</sup>

Despite criticism, the EPA insists that an alternative plan besides the OTC LEV plan can be enforced. The EPA's proposal for adoption involves a combination of EPA regulations, consent decrees and a memorandum of understanding.<sup>105</sup>

# A. Potential Problems

One possible problem with this alternative plan is that it cannot simply be adopted by the states. <sup>106</sup> Instead it requires that the automobile manufacturers consent to these stricter standards. <sup>107</sup> However, the automobile manufacturers are not willing to grant their consent without the OTC states agreeing not to require compliance with the OTC LEV plan. <sup>108</sup> In order for this to occur, New York and Massachusetts would have to be willing to drop their ZEV mandates. <sup>109</sup> After an intensive legal battle which granted these two states the right to implement the California LEV program, a retreat seems unlikely. <sup>110</sup> The EPA is unable to force either state to abandon its plan to create a compromise. <sup>111</sup>

The states and environmentalists are also highly critical because they do not envision a technology-forcing or advancing mechanism without a mandate. Missing in the automobile industry's plan is any mandate that ensures technology will be developed—not just with the ZEV but also with the ULEV which runs on alternative fuels like natural

105. The EPA believes that it has the statutory authority to promulgate these voluntary standards under sections 202 and 301 of the Act. *Id.* at 4714. Section 202(1)(a) allows the EPA administrator to set standards of emissions control, which could be voluntary or mandatory. *Id.* Although section 202(b)(1)(C) prohibits changing these mandatory Tier I standards before model year 2004, this does not prohibit the EPA from implementing voluntary standards. *Id.* at 4715. Finally, section 301(a) directs the administrator to set standards that will reduce air pollution from motor vehicles which is the purpose that these voluntary standards would serve. *Id.* 

<sup>104.</sup> Id.

<sup>106.</sup> Id. at 4724.

<sup>107.</sup> Id.

<sup>108.</sup> Id.

<sup>109.</sup> Id. at 4724-25.

<sup>110.</sup> New York and Massachusetts are arguing that attempts to prevent them from adopting the California LEV program encroaches upon their state sovereignty. *Air Pollution: Car Makers, States Agree to Continue Talks Whatever EPA's Decision on Petition*, 1994 [News] Daily Env't Rep. (BNA) No. 239, at D-15 (Dec. 15, 1994).

<sup>111. 60</sup> Fed. Reg. 4712, 4725 (1995).

gas. Because the auto industry's plan does not contain any mandates, researchers are not pushed into developing more efficient vehicles for the future. Other complaints focus on the lack of an enforcement mechanism to compel the auto manufacturers to develop an alternative fuel vehicle.

# B. Benefits

Despite these potential drawbacks, adoption of the automobile industry's 49-state plan or a similar alternative would be beneficial. Such a plan would improve the air quality not only in the Northeast but in the entire United States. By requiring vehicles to meet the same tailpipe emissions standards in California, as well as in the rest of the states, an automobile industry-based plan is also more efficient. This efficiency would aid in certifying vehicles for sale, reducing automakers' testing and design costs and in streamlining the overall marketing process. 114

Most importantly, the auto manufacturers are not being pinpointed as the responsible party for solving an environmental problem. Technology such as the zero-emission vehicle would not be rushed into the marketplace before it is ready. By rushing the ZEV onto a car lot without sufficient demand from at least two percent of the population, manufacturers risk penalties. Manufacturers do not have the option of paying the penalty and not complying with the mandate because such an action would be a criminal offense with jail sentences of up to six months. An alternative to the OTC LEV would avoid problems such as these because it would operate as a joint front that pools all resources together. Instead of wasting time and money on litigation, the parties

\_

<sup>112.</sup> Opponents of the Fed LEV plan argue that under the OTC LEV plan there would be 17 million ULEVs and ZEVs on the road by 2010. However, there is no such guarantee under the Fed LEV. *Air Pollution: Advisory Panel Deadlocks on Alternative to Northeastern Low-Emission Vehicle Plan*, 25 [Current Developments] Env't Rep. (BNA) 1221 (Oct. 21, 1994).

<sup>113.</sup> An analysis conducted by Thomas Darlington of the Air Improvement Resources, Inc. demonstrated that the 49-state plan's emission reduction for VOCs and NOx would be equivalent to the OTC LEV plan. 59 Fed. Reg. 53,396, 53,399-405 (1994). When migration and tourism are accounted for, the Fed LEV plan has equivalent or better results than the California LEV program. See id

<sup>114. 60</sup> Fed. Reg. 4712, 4713 (1995).

<sup>115.</sup> The penalty for not selling the required number of ZEVs is \$5000 per vehicle on the lot. *Air Pollution: Car Makers, States Agree to Continue Talks Whatever EPA's Decision on Petition, supra* note 110.

<sup>116.</sup> Id.

would work together towards a common goal of advancing technology and reducing motor vehicle emissions pollution.<sup>117</sup>

Furthermore, the auto manufacturers' plan is more practical because the Northeast climate is not conducive to the California program and the ZEV. The Northeast generates much of its electricity with oil and coal-fired plants. As a result, this extra generation of electricity for running an electric vehicle would not be as efficient in this region because it would produce pollution, when the overall goal would be to reduce it. To support this proposition, the EPA released a preliminary report that revealed that ZEVs can actually contribute to air pollution, depending on the source of energy used to turn the turbine at the plant. The report indicates that although electric vehicles eliminate pollution in heavily congested areas, emissions may increase at the power plant as a result of battery recharging.

The biggest drawback to the OTC LEV plan is possible adoption by any northeastern state of the ZEV mandate. This mandate requires the production of electric cars that run on batteries which are currently not well developed. Although "[b]atteries are coming . . . they're not aligned time-wise with the mandates." The ZEV range is now at 100 miles with hope that it will reach 250 miles in several years. Currently, battery units require six to eight hours of recharge time. Currently, battery units require six to eight hours of recharge time. Size gasoline run car, perhaps two or three times the price. For example, Chrysler Corp. has stated that a battery costs \$21,000.

<sup>117.</sup> Id

<sup>118.</sup> Let the Market Fight Auto Pollution, Bus. Wk., May, 30, 1994.

<sup>119</sup> *Id* 

<sup>120.</sup> George H. Unzelman, Four-Year Countdown to ZEVs on the Road, 6 Oxy-Fuel News (Phillips Bus. Info.) No. 14 (Apr. 11, 1994).

<sup>121.</sup> Id.

<sup>122.</sup> Air Pollution: Draft Framework on OTC LEV Talks Shows Little Agreement on Tough Issues Reached, supra note 94.

<sup>123.</sup> Unzelman, supra note 120.

<sup>124.</sup> *Id*.

<sup>125.</sup> Id.

<sup>126.</sup> Converting Chrysler Minivan to Electric May Double Cost, 9 Octane Wk. (Info. Resources) No. 19 (May 9, 1994).

<sup>127.</sup> Id.

electric vehicles are not ready for the marketplace because suitable batteries are not available to meet transportation requirements.

The introduction of an inefficient vehicle at a high price will only destroy consumer confidence in electric cars. In general, these higher prices will encourage many motorists to keep their older, more polluting vehicles on the road which will limit the air quality improvements made by newer vehicles. Overall, adoption of the OTC plan in the Northeast would add a considerable amount to the price of a car because the states still have the option of imposing the ZEV mandate. Therefore, the auto industry's plan or the ATV-based alternative would be less costly to the consumer because neither contains a ZEV mandate.

Furthermore, technological strides will still be made if the ZEV mandate is not adopted by the northeastern states. Technology is already being forced by the California LEV program being implemented in California and through the Partnership for a New Generation of Vehicles—a project begun by President Clinton to unite the Big Three automakers and United States research laboratories to develop a superefficient prototype in ten years.<sup>128</sup>

Finally, an alternative program does contain a method of enforcement. The OTC LEV plan could automatically be used as a "backstop" to any voluntary agreement that is reached by the OTC states and the automobile industry. This arrangement would encourage the automakers to follow through with the agreed upon program because they would be threatened by the reinstitution of the OTC LEV plan, and also the possibility of northeastern states choosing to adopt the ZEV mandate.

# VII. CONCLUSION

In its effort to save the nation from the environmental harms of the polluting automobile, the Clean Air Act has succeeded in creating yet another environmental controversy which pits the government against industry. The battle of the OTC LEV plan versus the Fed LEV plan focuses around one state which must contend with its own environmental problems.

From its earthquakes, to its mud slides, to its forest fires, California is a unique state. Of the seven American cities with the

128. Air Pollution: Equivalency of Air Quality Benefits in Automaker Plan for OTC Hotly Debated, 1994 [News] Daily Env't Rep. (BNA) No. 189, at D-23 (Oct. 3, 1994).

highest ozone levels, six are in California. 129 More than ninety percent of Californians live in areas which do not meet federal air standards and over two thirds of this pollution comes from mobile sources. 130 The Los Angeles basin is still a serious carbon monoxide nonattainment area. 131 Even more frightening is the fact that children in the Los Angeles Basin suffer a fifteen percent reduction in their lung capacity because of the smog concentration. 132 Obviously, California needs desperate measures to attain healthy air quality in its state. However, these desperate measures, with mandates for vehicles that are not even fully developed yet, should remain centered in California. It is not necessary that ZEV mandates be implemented in the entire Northeast region.

Although this battle is far from over, fortunately, it has progressed far enough so that both sides are willing to meet each other at the negotiation table. In the compromise agreement that will eventually be reached, one important factor must be remembered—the plan should protect not just the environment, but also the individual consumer—not just his health, but his pocketbook.

TARA A. STANTON

<sup>129. 140</sup> CONG. REC. S6207-02 (daily ed. May 24, 1994) (statement of Sen. Boxer).

<sup>130.</sup> Id.

<sup>131.</sup> Id.

<sup>132.</sup> Id.