House Oversight Subcommittee on Environment
November 5, 2019

"Trump's Wrong Turn on Clean Cars"

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Thank you, again, Chairman Rouda and Ranking Member Comer, for inviting me to testify at the Subcommittee's October 29, 2019 hearing titled "Trump's Wrong Turn on Clean Cars: The Effects of Fuel Efficiency Rollbacks on the Climate, Car Companies and California."

At the hearing, opponents of the Trump administration's Safer Affordable Fuel-Efficient (SAFE) Vehicles rule argued that the rule is unlawful, anti-competitive, and damaging to public health. This supplemental testimony addresses those criticisms. I respectfully request that it be included in the hearing record.

I. Preemption Issues

At the October 29th hearing, opponents made three criticisms of SAFE rule's preemption of California's motor vehicle greenhouse gas (GHG) emission standards and zero-emission vehicle mandate. None is valid.

a. *Criticism: The SAFE rule deprives California of its "right" to be a "laboratory of democracy."*

That is incorrect. Motor vehicle GHG emission standards inherently and substantially regulate fuel economy. The SAFE rule enforces the Energy Policy and Conservation Act's (EPCA) preemption of state laws or regulations "related to" fuel economy standards.[1] California does not have a right to do that which federal law preempts.

The SAFE rule does not revoke any of the scores of California waivers for emission standards not "related to" fuel economy standards.

California remains free to promote zero-emission vehicles and the associated fueling infrastructure via tax credits, appropriations, and the state's emissions trading program.

[1] U.S. Code § 32919.Preemption, https://www.law.cornell.edu/uscode/text/49/32919

California may also regulate and even ban air conditioner refrigerants based on their global warming potential, because such policies have no substantial effect on fuel economy.[2]

California's right to be a laboratory of democracy does not include the power to dictate fuel economy policy to the other 49 states. That is inconsistent with states' equal sovereignty in our federal system. Congress took care to prevent any state from exercising such unequal power when it omitted from EPCA any option to waive federal preemption of state laws or regulations "related to" fuel economy.[3]

Critics of the SAFE rule note that Section 209(b) of the Clean Air Act (CAA) allows EPA to waive federal preemption of "state" (i.e. California) motor vehicle emission standards. However, the CAA waiver is a reasonable departure from the equal sovereignty principle, because California is a special needs case. The state's "compelling and extraordinary conditions"—its topography, meteorology, and large number of vehicles—make California's air pollution problems unusually severe and intractable.

Prior to the July 2009 waiver authorizing California's motor vehicle greenhouse gas emissions standards,[4] all EPA-approved California emission standards addressed air pollution related to the state's compelling and extraordinary conditions. In contrast, the fossil-fuel greenhouse effect is a global phenomenon. California's vehicles emit GHGs, but so do mobile and stationary sources throughout the world, and the resulting "global pool" of GHG emissions is not any more concentrated in California than anywhere else.[5]

Even if one assumes the terms "compelling and extraordinary" may apply to climate change impacts, such as heat waves, drought, and coastal flooding, California's vulnerability is not "sufficiently different" from the rest of the nation to merit waiving federal preemption of state emission standards.[6]

In short, neither the "causes" nor the "effects" of climate change have a special California nexus. Thus, even if there were no EPCA preemption, the state's "compelling and extraordinary" conditions would not justify empowering California to regulate fuel economy beyond its borders.

b. Criticism: The SAFE rule's revocation of California's 2013 waiver is unprecedented and, therefore, obviously unlawful.

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[2] EPA and NHTSA, The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks, 83 FR 43235, August 24, 2018, https://www.govinfo.gov/content/pkg/FR-2018-08-24/pdf/2018-16820.pdf

[3] EPA and NHTSA, The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program, 84 FR 53122, September 27, 2019, https://www.govinfo.gov/content/pkg/FR-2019-09-27/pdf/2019-20672.pdf

[4] EPA, California State Motor Vehicle Pollution Control Standards; Notice of Decision Granting a Waiver of Clean Air Act Preemption for California's 2009 and Subsequent Model Year Greenhouse Gas Emission Standards for New Motor Vehicles; Notice, 74 FR 32744-32784, July 8, 2009, https://www.gpo.gov/fdsys/pkg/FR-2009-07-08/pdf/E9-15943.pdf

[5] 83 FR 43246

[6] 83 FR 43247-49

That, too, is incorrect. The overwhelming majority of waivers EPA has granted to California since 1969, and all waivers granted before July 2009, are for emission standards that do not substantially affect fuel economy.[7] EPA's 2013 waiver authorizing California's Advanced Clean Car program for model years 2017-2025 builds upon the precedent-breaking July 2009 waiver, which unlawfully empowered CARB to prescribe de-facto fuel economy standards. An unprecedented breach of federal law can only be corrected by an unprecedented enforcement action. Revoking the 2013 waiver is thus both appropriate and lawful.

c. *Criticism: The SAFE rule flouts the rulings of district courts in California and Vermont, which upheld California's authority to promulgate and enforce motor vehicle greenhouse gas emission standards.*

The California and Vermont district courts argued that EPA's granting of a CAA Section 209(b) waiver would "federalize" California's motor vehicle GHG standards, exempting the standards from EPCA preemption, which applies solely to state and local policies, not to "other standards of the [federal] government."

The courts misunderstood the nature of preemption. Congress's power to preempt state laws and regulations derives from U.S. Constitution's Supremacy Clause. Once a preemption statute is in effect, it automatically renders null and void any state law or regulation that conflicts with it. As the Ninth Circuit Court has stated, ''Under Federal law, an act occurring in violation of a statutory mandate is void *ab initio.*''[8] EPCA voided California's motor vehicle GHG standards years before EPA began to review them.

II. Economic Issues

Governor Brown called the SAFE rule "economically suicidal" because "the zero-emission vehicle will outcompete most fossil-fuel models" in five years. He chided Detroit for producing "big gas guzzlers that nobody wants." More people undoubtedly will buy zero-emission vehicles as automakers chip away at the obvious downsides—higher cost, limited range, smaller size, and longer refueling times. However, the industry still has many miles to go before electric and fuel cell cars are most people's vehicles of choice. SUVs and pickups are today's top selling vehicles and likely will remain so for many years to come.

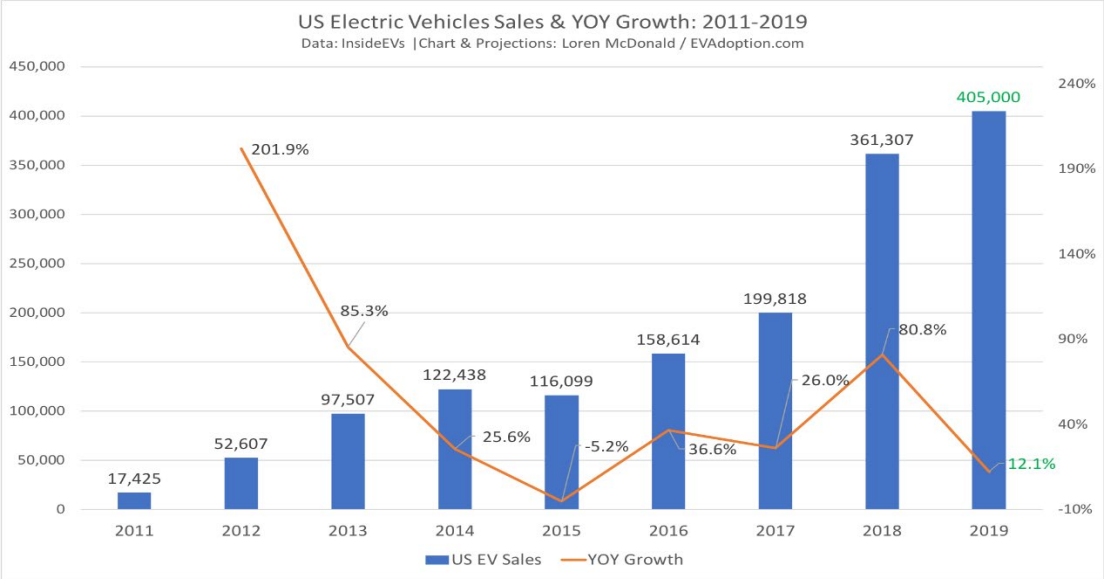
U.S. electric vehicle (EV) sales in 2018 were up 81 percent over 2017. That sounds impressive, but "EV sales as fraction of all new car sales were 1.5 percent in Q1 2019," according to the Edison Electric Institute.[9] *Inside EVs* projects that in 2019, Americans will

[7] EPA, Vehicle Emissions California Waivers and Adoptions, https://www.epa.gov/state-and-local-transportation/vehicle-emissions-california-waivers-and-authorizations

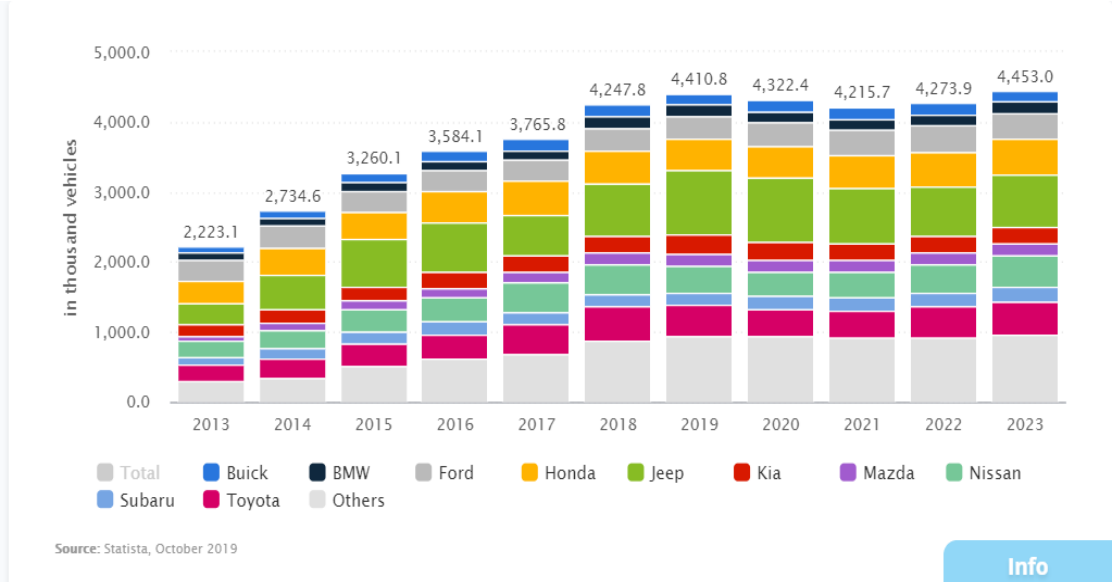
[8] Cabazon Band of Mission Indians v. City of Indio, Cal., 694 F.2d 634, 637 (9th Cir. 1982).

[9] EEI, Electric Vehicle Sales: Facts & Figures, April 2019, https://www.eei.org/issuesandpolicy/electrictransportation/Documents/FINAL_EV_Sales_Update_April2019.pdf

buy 405,000 EVs, an increase of 12 percent over 2018, achieving a market share of about 2.45 percent.[10]



In contrast, U.S. sales of small SUVs are projected to reach 4.453 million in 2023, according to Statista.Com.[11]



[10] Loren McDonald, "Forecast: 2019 U.S. EV Sales Growth Will Drop to ~12 Percent," *Inside EVs*, January 20, 2019, https://cleantechnica.com/2019/01/20/forecast-2019-us-ev-sales-growth-will-drop-to-12/

[11] Statisa.Com, Small SUVs, United States, October 2019, https://www.statista.com/outlook/1111000/109/small-suvs/united-states

Although total U.S. new car sales declined by 1.1 percent in Jan.-Oct. 2019 compared to Jan.-Oct. 2018, light truck (pickup truck and SUV) sales increased by 3.1 percent, while passenger car sales decreased by 9.9 percent.[12]

Sales of new vehicles by type

Type	2019 Oct.	2018 Oct.	Y-o-Y	2019 Jan.-Oct.	2018 Jan.-Oct.	Y-o-Y
Passenger Cars	355,266	425,079	-16.4%	4,154,939	4,612,293	-9.9%
Light Trucks (Pickup Truck, SUV)	988,576	928,767	6.4%	9,945,686	9,647,397	3.1%
Total	**1,343,842**	**1,353,846**	**-0.7%**	**14,100,625**	**14,259,690**	**-1.1%**

Source: MarkLines Data Center

Note that the 3.1 percent growth of light truck sales in 2019 builds on 7.7 percent growth in 2018, which gave light trucks a record 69 percent of the U.S. new car market.[13]

In short, there is no warrant for Gov. Brown's claim that Detroit is producing vehicles "people don't want." The continuing boom in SUV, crossover, and pickup sales is all-the-more impressive given the generous tax credits and other subsidies provided by federal and state programs for electric vehicles and infrastructure.[14] If zero-emission vehicles are really what "people want," why do governments need to mandate and subsidize them?

Gov. Brown cited China's EV policies as a model for U.S. policymakers. However, as Manhattan Institute scholar Mark P. Mills points out, China recently decided to phase out its EV subsidies, which immediately decreased sales:

> China has spent $60 billion cumulatively in domestic subsidies in order to become the dominant global player, but it ended the EV gravy train this year, cutting subsidies by 65 percent, with plans to eliminate them entirely next year. The result? China's vaunted EV sales growth went negative. Having abandoned direct subsidies, China will now simply require that EVs make up 3 to 4 percent of all domestic car production.[15]

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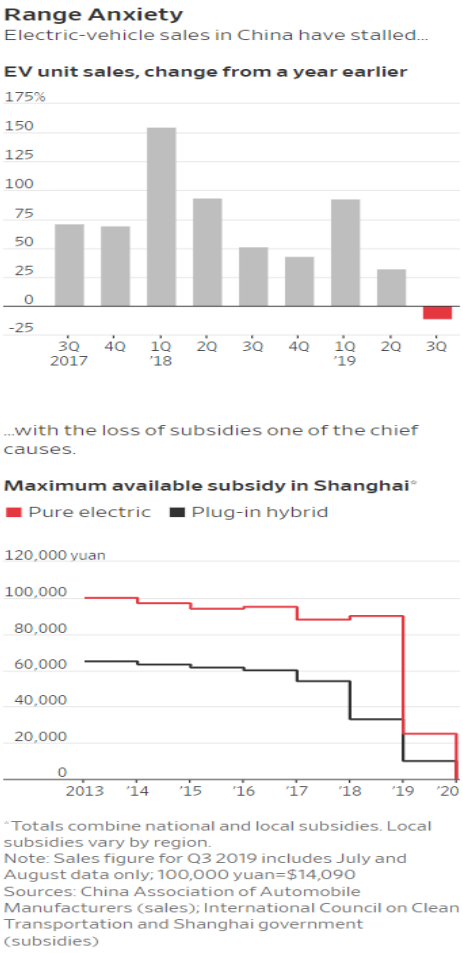
[12] MarkLines, USA—Flash Report, Sales Volume, 2019, https://www.marklines.com/en/statistics/flash_sales/salesfig_usa_2019

[13] David Muller, "Light Trucks Are Now a Record 69 Percent of the U.S. Market," AutoWeek, January 7, 2019, https://autoweek.com/article/car-news/light-trucks-take-record-69-us-market

[14] Energy.Gov, Electric Vehicles: Tax Credits and Other Incentives, https://www.energy.gov/eere/electricvehicles/electric-vehicles-tax-credits-and-other-incentives; Energy.Gov, October 5, 2015 Incentives for Installation of Electric Vehicle Charging Stations, https://www.energy.gov/eere/vehicles/fact-893-october-5-2015-incentives-installation-electric-vehicle-charging-stations; California Air Resources Board, California Vehicle Rebate Program, https://ww3.arb.ca.gov/msprog/lct/cvrp.htm

[15] Mark P. Mills, "Electric Car Fantasy," *City Journal*, October 30, 2019, https://www.city-journal.org/schumer-electric-cars

The figure below shows the dependence of China's EV sales on the availability of subsidies.[16]



Reports[17] that China is mulling a 60 percent EV market share sales quota for 2035 is difficult to reconcile with the termination of subsidies in 2020 and replacement of the previously announced 12 percent EV sales quota[18] with a 3-4 percent quota.

Gov. Brown warned that if California does not prevail in its struggle with President Trump, most of the cars Americans buy will someday be made in China. Respectfully, I think that is backwards. Beijing, a communist regime with a long history of central planning, would be only too happy to produce cars to meet an ever-expanding, centrally-planned, U.S. EV sales quota. If U.S. policymakers increasingly mandate the sale of zero-emission vehicles, squashing

[16] Figure Source: Trefor Moss, "China Slips in its Rush to Embrace Electric Vehicles," Wall Street Journal, September 26, 2019, https://www.wsj.com/articles/china-slips-in-its-rush-to-embrace-electric-vehicles-11569497436

[17] Bloomberg News, "China Mulls Goal of 60% of Auto Sales to Be Electric by 2035," September 6, 2019, https://www.bloomberg.com/news/articles/2019-09-06/china-mulls-target-for-60-of-auto-sales-to-be-electric-by-2035?utm_source=twitter&cmpid=socialflow-twitter-business&utm_medium=social&utm_campaign=socialflow-organic&utm_content=business

[18] Bloomberg News, "China Is About to Shake Up the World of Electric Cars," November 14, 2018, https://www.bloomberg.com/news/articles/2018-11-14/china-is-about-to-shake-up-the-world-of-electric-cars-quicktake

U.S. automakers' competitive advantage in light trucks, Chinese cars may indeed become as common in U.S. markets as Chinese computers and electronics.

III. Health Issues

a. Clean Cars

The title of the hearing ("Trump's Wrong Turn on Clean Cars") implies the SAFE rule is an attack on "clean cars" and is "pro-polluter." That is a false narrative.

The SAFE rule eliminates California's power to regulate motor vehicle carbon dioxide (CO_2) emissions. Carbon dioxide is not an air pollutant. Yes, it is a greenhouse gas, but so is water vapor. Like oxygen, CO_2 is a clear, odorless gas and vital component of clean air on planet Earth.

The auto emissions that chiefly impact air quality are nitrogen oxides and volatile organic compounds, which form ozone smog in the presence of heat and sunlight, and soot particles from incomplete combustion. Due to advances in emission control technology and fuels, all new cars and trucks today are practically zero-*pollution* vehicles.

That is evident from any number of EPA webpages posted during previous administrations.[19] Compared to 1960s vehicle models, today's new cars and light trucks are roughly 99 percent cleaner for common air quality contaminants (hydrocarbons, carbon monoxide, nitrogen oxides, and particulates). A chart produced by the U.S. Auto Alliance[20] quantifies this progress to the tenth of a percent:

Historical Reductions of Ozone from Automobiles

YEAR	FEDERAL STANDARDS FOR HYDROCARBONS + NOx (g/mi)	EMISSION REDUCTIONS
Pre-control	14.7	0%
1968	10.4	29.3%
1980	2.41	83.6%
1994	0.65	95.6%
2004	0.125	99.1%
2017	0.086	99.4%
2025	0.03	99.8%

[19] EPA, The History of Reducing Tailpipe Emissions, http://www.ehso.com/ehshome/auto-emissions_chronol.htm; History of Reducing Transportation Air Pollution in the United States, https://www.epa.gov/transportation-air-pollution-and-climate-change/accomplishments-and-success-air-pollution-transportation; New Cars, Trucks, Non-Road Engines Use State-of-the-Art Emission Control Technologies, https://www.epa.gov/clean-air-act-overview/progress-cleaning-air-and-improving-peoples-health#cars

[20] https://autoalliance.org/energy-environment/clean-car-progress/

With respect to smog-forming emissions, today's vehicles are already 99.4 percent cleaner than vehicles manufactured before 1968. By 2025, vehicles will even cleaner and air quality will continue to improve regardless of whether courts uphold or reject the SAFE rule. The SAFE rule will have negligible or even slightly positive impacts on U.S. air quality, for four reasons.

First, as American Enterprise Institute economist Benjamin Zycher explains, the SAFE rule's relaxation of model year 2020-2026 fuel economy standards "does not change the vehicular emissions limits for such conventional ('criteria') pollutants as carbon monoxide or nitrogen oxides. Those emission standards are defined in grams per mile, not grams per gallon, so that a relaxation of mileage requirements would not affect those emissions."[21]

Second, as the SAFE rule argues, relaxing fuel economy standards will make new cars more affordable to middle-income households. Any policy that facilitates replacing older with newer vehicles promotes air quality, because new cars are cleaner as well as safer and more fuel efficient.

Third, EPA's latest standards for nitrogen oxides, organic emissions, and particulates, known as Tier 3, run from 2017-2025.[22] The Tier 3 program is projected to help reduce ambient levels of soot and smog through 2030. Nothing the Trump administration does will stop that.

Fourth, when applying for the 2013 waiver for its Advanced Clean Car program, which includes the ZEV mandate, CARB noted there is "no criteria emissions benefit" from the ZEV requirements beyond those achieved by the state's Low Emission Vehicle III (LEV III) program. The SAFE rule leaves California's LEV III standards intact.[23]

CARB did project an upstream emissions benefit to the extent that the ZEV mandate reduces petroleum consumption and, thus, emissions associated with petroleum refining. However, I am unable to locate CARB's estimates of the expected reductions in refinery emissions and the purported health benefits thereof. Suffice it to say that refineries are already regulated under the Clean Air Act's new source performance standards program, hazardous air pollutant program, and national ambient air quality standards program.

b. Zero Emission ≠ Clean

Although Zero-Emission Vehicles, by definition, have lower emissions than other vehicles, that does not necessarily make them "cleaner," and not only because CO_2 emissions do not dirty or foul the air. A life-cycle analysis comparing ZEVs and conventional vehicles would

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[21] Benjamin Zycher, "The California auto mileage deal and the leftist crusade against personal transportation," AEI Blog, September 3, 2019, https://www.aei.org/economics/the-california-auto-mileage-deal-and-the-leftist-crusade-against-personal-transportation/

[22] EPA, Control of Air Pollution from Motor Vehicles: Tier 3 Motor Standards for Fuels and Vehicles, 81 FR 23414, April 28, 2014, https://www.govinfo.gov/content/pkg/FR-2014-04-28/pdf/2014-06954.pdf

[23] EPA, Notice of Decision Granting a Waiver of Clean Air Act Preemption for California's Advanced Clean Car Program and a Within the Scope Confirmation for California's Zero Emission Vehicle Amendments for 2017 and Earlier Model Years, 78 FR 2122, January 9, 2013, https://www.govinfo.gov/content/pkg/FR-2013-01-09/pdf/2013-00181.pdf

also consider the energy (usually fossil-based) required to produce electric car batteries and pollution from the mining activities required to supply the raw materials. As the Manhattan Institute's Mills observes in a recent column:

> But it requires the energy equivalent of about 100 barrels of oil to fabricate one battery capable of storing the energy contained in a single barrel of oil. Importing batteries manufactured on Asia's coal-heavy grid means that consumers are just exporting carbon-dioxide emissions, along with jobs. It takes years to offset those emissions when the EV is plugged into our real-world power grid, where coal and natural gas still account for 70 percent of electricity generation.
>
> Then there's the array of primary minerals—lithium, cobalt, manganese, carbon, nickel, copper, aluminum—needed to produce a 1,000-pound automotive battery. Accessing the necessary minerals for that one battery entails mining, moving, and processing some 500,000 pounds of raw materials. Embracing batteries at automotive scales would lead to an unprecedented global expansion in mining, with all the accompanying negative environmental effects that tend not to be palliated in developing countries.

c. Asthma

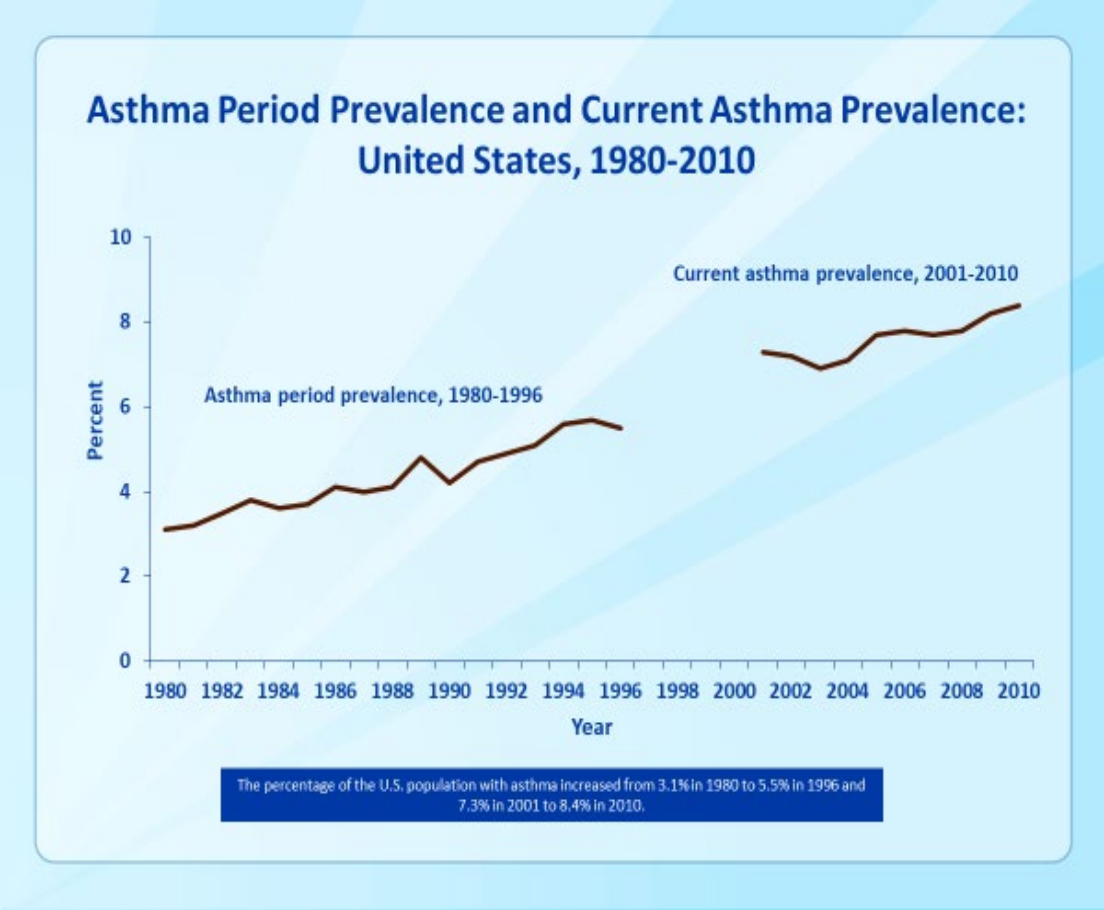
Some witnesses and Subcommittee members claimed the SAFE rule would harm people with asthma, especially children. Such allegations are unfounded. To repeat, CO_2, the only "pollutant" increased by the rollback, is not an air quality contaminant. Moreover, it is far less clear than commonly supposed that air pollution is a significant factor in asthma prevalence or exacerbations.

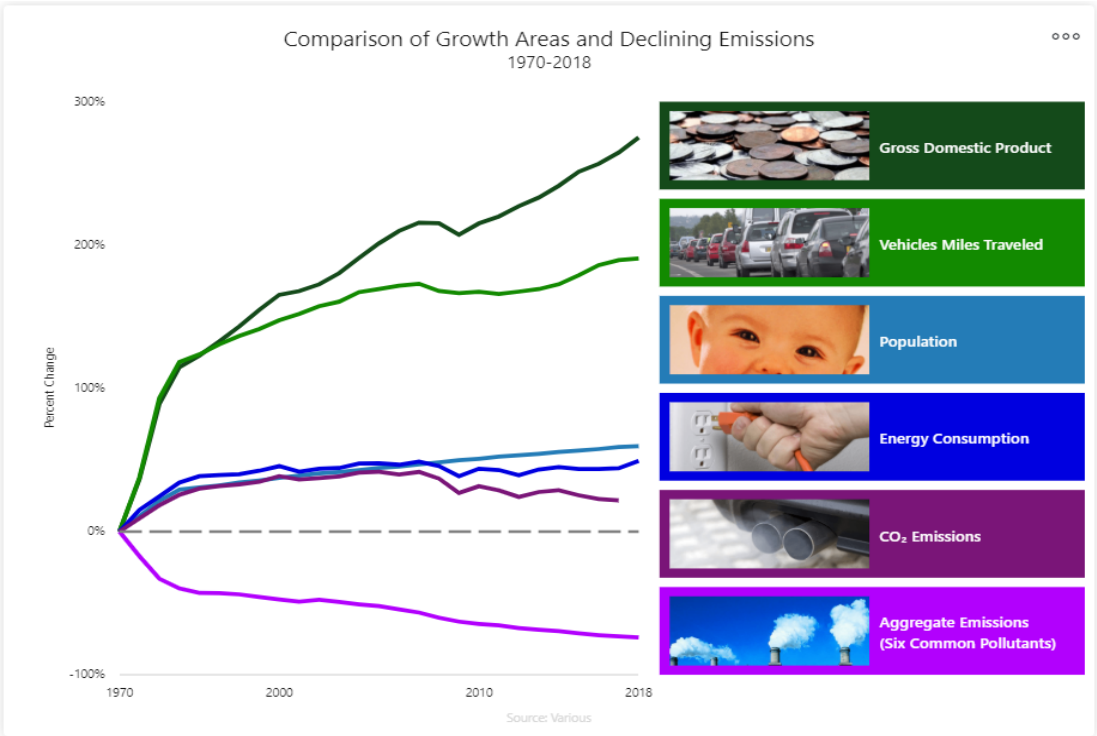
Correlation does not prove causation. However, there usually is not causation without correlation. In the case of air pollution and asthma, there are significant negative correlations.

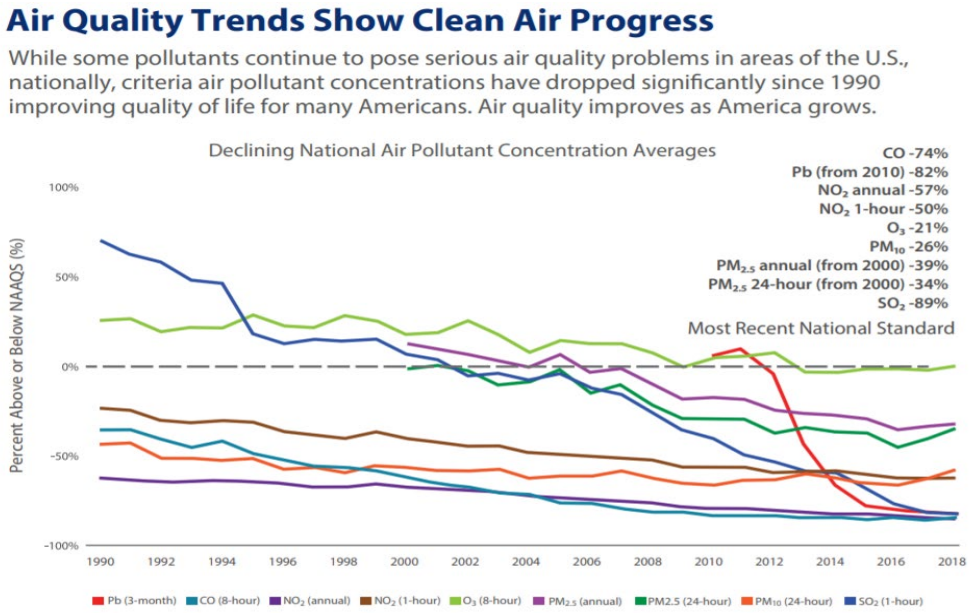
First, as is often justly lamented, U.S. asthma prevalence rates have been increasing since 1980.[24] However, U.S. air pollution emissions and concentrations have been declining since 1970. Between 1970 and 2018, the combined emissions of the six common pollutants ($PM_{2.5}$ and PM_{10}, SO_2, NO_x, VOCs, CO and Pb) dropped by 74 percent. More importantly, concentrations of asthma-triggering pollutants—O_3, SO_2, NO_2, $PM_{2.5}$—have declined by significant percentages.[25] See the figures below.

[24] CDC, Asthma prevalence in the United States, Power Point, June 2014, https://www.cdc.gov › asthma › speakit › epidemiologyrevised.pptx.ppt

[25] EPA, Our Nation's Air Report, https://gispub.epa.gov/air/trendsreport/2019/#growth_w_cleaner_air


Asthma Period Prevalence and Current Asthma Prevalence: United States, 1980-2010
Current asthma prevalence, 2001-2010
Asthma period prevalence, 1980-1996
Percent
Year
0
2
4
6
8
10
1980 1982 1984 1986 1988 1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010
The percentage of the U.S. population with asthma increased from 3.1% in 1980 to 5.5% in 1996 and 7.3% in 2001 to 8.4% in 2010.


Comparison of Growth Areas and Declining Emissions
1970-2018
Percent Change
300%
200%
100%
0%
-100%
1970
2000
2010
2018
Gross Domestic Product
Vehicles Miles Traveled
Population
Energy Consumption
CO₂ Emissions
Aggregate Emissions (Six Common Pollutants)
Source: Various



Ozone (O_3) levels are highest during the summer because people drive more and heat promotes ozone formation. Consequently, we would expect asthma exacerbations to be highest during June-August. In fact, exacerbations are highest during September-November. Consider these excerpts from two recent studies.

> *An annual peak in asthma exacerbations was observed during the fall months (September through November)* among children who lived in Charlottesville, Virginia, as well as throughout the state of Virginia. An increase in exacerbations, which peaked in November, was observed for exacerbations among children who lived in Tucson, Arizona, and Yuma, Arizona. In contrast, exacerbations among children from New Orleans, Louisiana, increased in September but remained elevated throughout the school year. Although there was annual variation in the frequency of exacerbations over time, the seasonal patterns observed remained similar within the locations from year to year. *A nadir in the frequency of attacks was observed during the summer months in all the locations.*[26]
>
> While asthma exacerbations can occur at any time during the year, seasonal patterns exist, and in children, *exacerbation rates are highest in the fall and lowest in the summer.* The seasonal rise in fall exacerbations is highly consistent, and, based on studies from Canada, has been referred to as the "September Epidemic." Fall exacerbations have been attributed to an increased frequency of rhinovirus respiratory infections among children when they return to school. Other factors, however, such as allergic sensitization and an

[26] Julia A. Wisnieski, M.D., et al. 2016. A comparison of seasonal trends in asthma exacerbations among children from geographic regions with different climates. *Allergy Asthma Proc.* 37: 475-481 (emphasis added), https://www.ncbi.nlm.nih.gov/pubmed/27931303

> increase in exposure to environmental allergens, have also been proposed to work in combination with viral respiratory infections to trigger fall exacerbations of asthma.[27]

None of this is to say that high levels of air pollution don't harm people or trigger asthma. The point rather is that whatever is increasing asthma prevalence in the United States since 1980, and spiking asthma symptoms in colder months, does not appear to be air pollution. To repeat, asthma prevalence has increased as air pollution emissions and concentrations have fallen, and exacerbations tend to increase in months when air pollution levels are lower and decrease in months when air pollution levels are higher.

There is as yet no consensus on why asthma rates have gone up as air pollution has gone down. The answer may lie in exposures to indoor allergens, such as cockroach dust, rodent allergens, and mold, which are significant contributors to asthma, especially in women and children, who spend up to 90 percent of their time indoors. Herewith a few relevant excerpts.

Cockroach Dust and Asthma

> For a year, the study followed 102 mostly low-income families with children diagnosed with asthma. A little more than half of the homes were treated with cockroach bait. Technicians checked for roaches every two to three months, placing traps in the kitchen, living room and children's bedrooms.
>
> Three months into the study there was a noticeable difference in the number of bugs in houses with cockroach bait and homes compared to homes with no intervention. At 12 months, no homes treated with bait had a cockroach infestation compared to 22 percent of control homes that were not treated with insect bait.
>
> Children in homes being treated had 47 fewer days with asthma symptoms over the course of a year; the number of unscheduled visits to a clinic or emergency room was also 17 percent lower in the intervention group.[28]

Rodent Allergens and Asthma

> Mouse allergen, a well-recognized occupational allergen, has only recently been identified as a common household allergen. Matsui and coworkers investigated the role of mouse allergen exposure in the Baltimore Indoor Environment Study of Asthma in Kids (BIESAK) cohort and other homes in Baltimore, MD, reporting that 100% of homes in inner city Baltimore had detectable mouse allergen in settled dust samples. In addition, airborne mouse allergen was detected in greater than 80% of the bedrooms sampled. . . . In the BIESAK cohort, both asthma symptoms and asthma-related health care use were more common among mouse-sensitized participants. . . . The associations between mouse

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[27] Stephen J. Teach, M.D., et al. 2015. Seasonal Risk Factors for Asthma Exacerbations among Inner City Children, *J Allergy Clin Immunol*. 135(6): 1465–1473.e5. (emphasis added), https://www.ncbi.nlm.nih.gov/pubmed/25794658

[28] Rabito, FA et al. 2017. A single intervention for cockroach control reduces cockroach exposure and asthma morbidity in children. Journal of Clinical Immunology 140(2):565-570, https://www.ncbi.nlm.nih.gov/pubmed/28108117

allergen exposure and asthma outcomes were found to be independent of cockroach sensitization/exposure, public health insurance, atopy, age, and sex.[29]

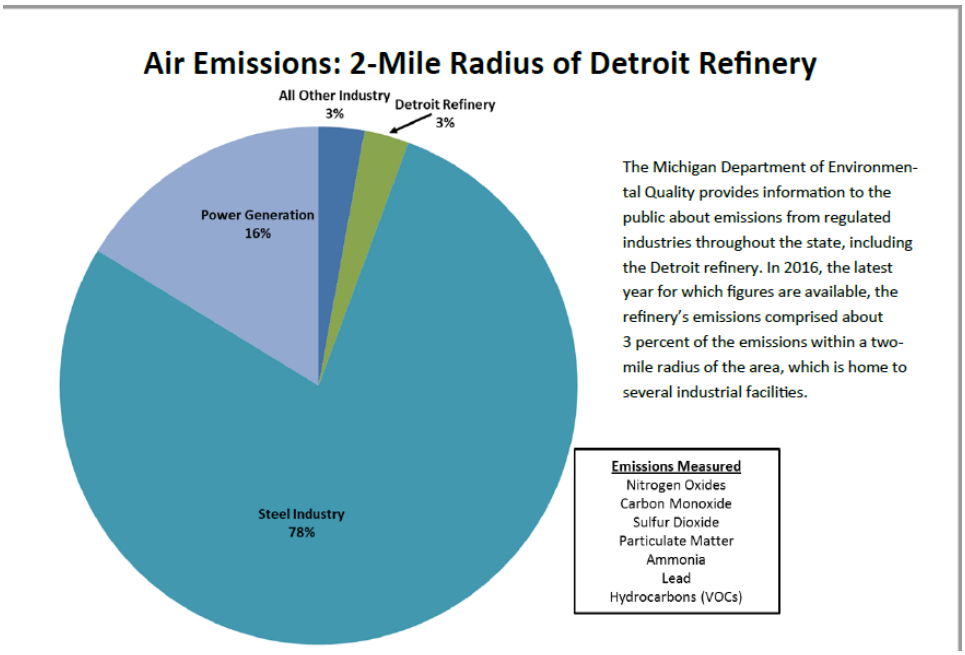
Mold and Asthma

Of the 21.8 million people reported to have asthma in the U.S., approximately 4.6 (2.7-6.3) million cases are estimated to be attributable to dampness and mold exposure in the home. An examination of the literature covering dampness and mold in schools, offices, and institutional buildings, which is summarized in the appendix, suggests that risks from exposure in these buildings are similar to risks from exposures in homes.[30]

d. Oil Refineries and Asthma

During the hearing, Rep. Rashida Tlaib (D-MI) accused the local Marathon Petroleum refinery of exacerbating asthma in her district. She seemed to imply that California's motor vehicle standards would promote the health of her constituents by accelerating the refinery's demise.

Rep. Tlaib's accusation is implausible for three reasons. First, according to Marathon data, the Michigan refinery is responsible for only 3 percent of air emissions within the two-mile radius of the facility.



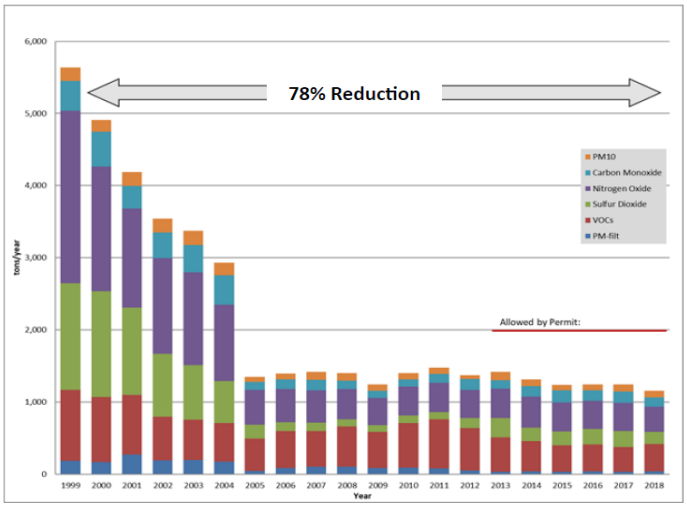
[29] Patrick N. Breysse, et al. 2010. Indoor Air Pollution and Asthma in Children. Proceedings of the American Thoracic Society Vol. 7, No. 2, https://www.atsjournals.org/doi/full/10.1513/pats.200908-083RM

[30] David Mudarri (EPA Indoor Environments Division) and William J. Fisk (Lawrence Berkeley National Laboratory Indoor Environment Department). 2007. Indoor Air Journal, Vol. 17, p. 226-235, https://iaqscience.lbl.gov/sites/default/files/Health%20and%20Economic%20Impacts%20of%20Dampness.pdf

Second, the refinery's criteria pollutant emissions have decreased by almost 80 percent over the past 20 years.

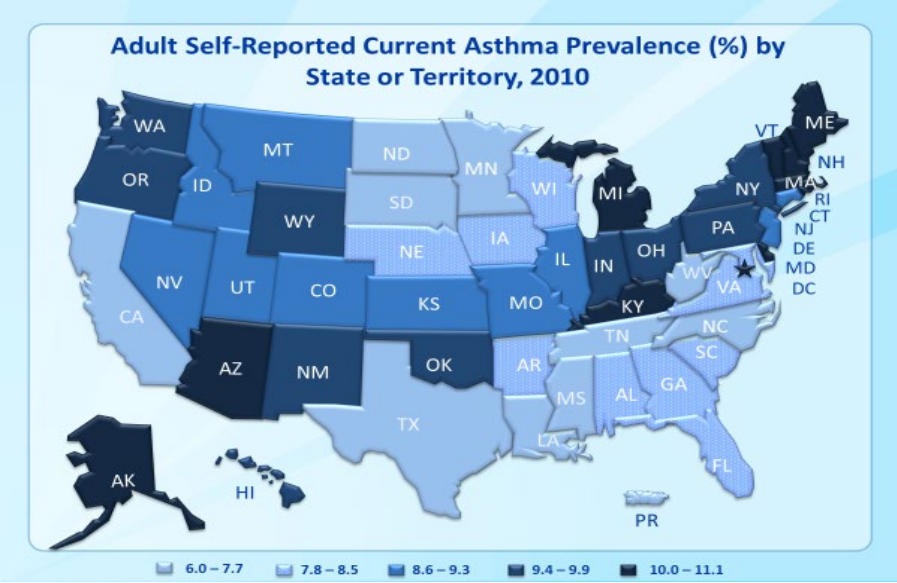
Detroit Refinery Criteria Air Pollutant Emissions

At Marathon Petroleum Company, we invest hundreds of millions of dollars in technology to enable us to produce fuels and other products more cleanly than ever before. In Detroit, our efforts have dramatically reduced our emissions over the years, even as we have increased the amount of crude oil we are able to process.



More information: http://www.detroitrefinery.com

Third, the state with the largest number of refineries, gas producing wells, and active oil wells is Texas, and Texas is tied with South Dakota and Minnesota in having the lowest asthma rate in the nation (7.3 percent).[31]



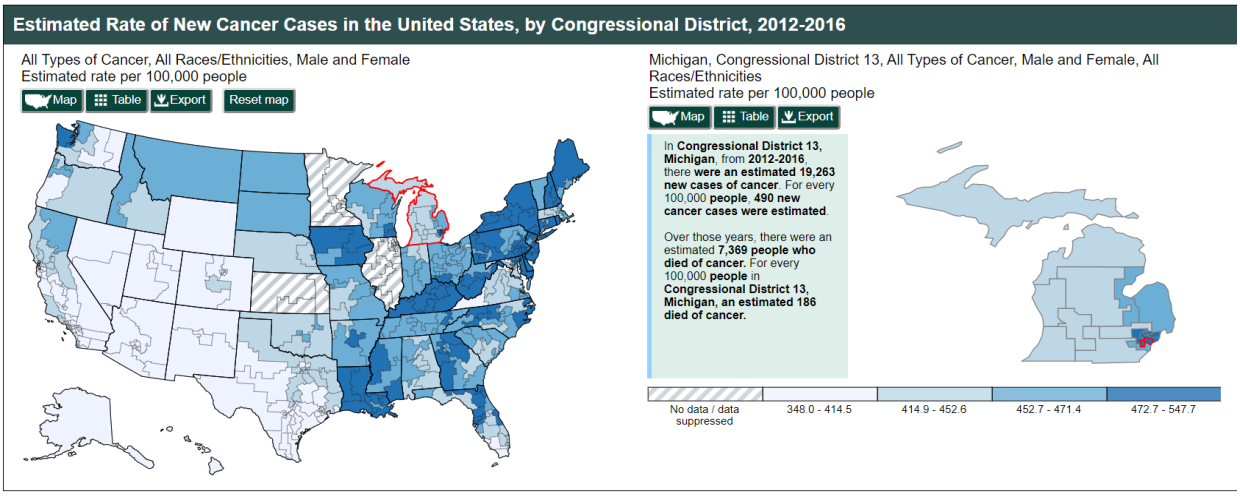
New England States, which have no petroleum refineries, have higher rates of asthma prevalence than Texas. Indeed, Vermont, which has no coal, oil, or gas production, has one of the nation's highest asthma prevalence rates (11.5 percent).

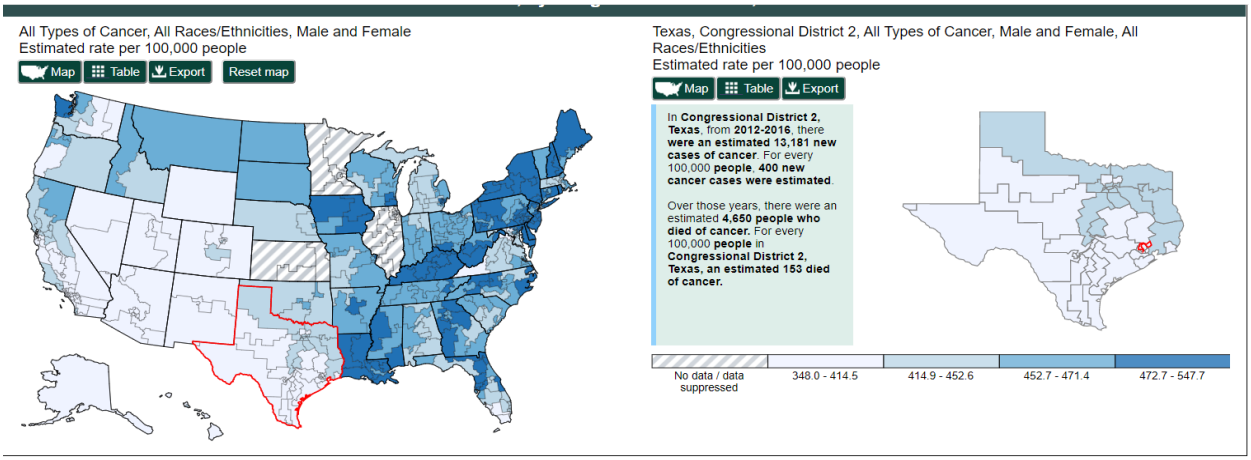
[31] Centers for Disease Control and Prevention, Most Recent Asthma State or Territory Data, https://www.cdc.gov/asthma/most_recent_data_states.htm

e. Refineries and Cancer

Rep. Tlaib also suggested the Marathon refinery is causing cancer in her district. That, too, is implausible.

The Marathon facility in her district has a refining capacity of 140,000 barrels per day.[32] The Texas Gulf Coast is home to the nation's three largest refineries: Motiva Enterprise's Port Arthur (680,000 bpd), Marathon's Galveston Bay (586,000 bpd), and ExxonMobil's Baytown (560,500 bpd).[33] Centers for Disease Control and Prevention data show that the congressional districts in which those facilities are located (Texas 2, 14, and 29) all have significantly lower cancer rates than Rep. Tlaib's district (Michigan 13).[34]

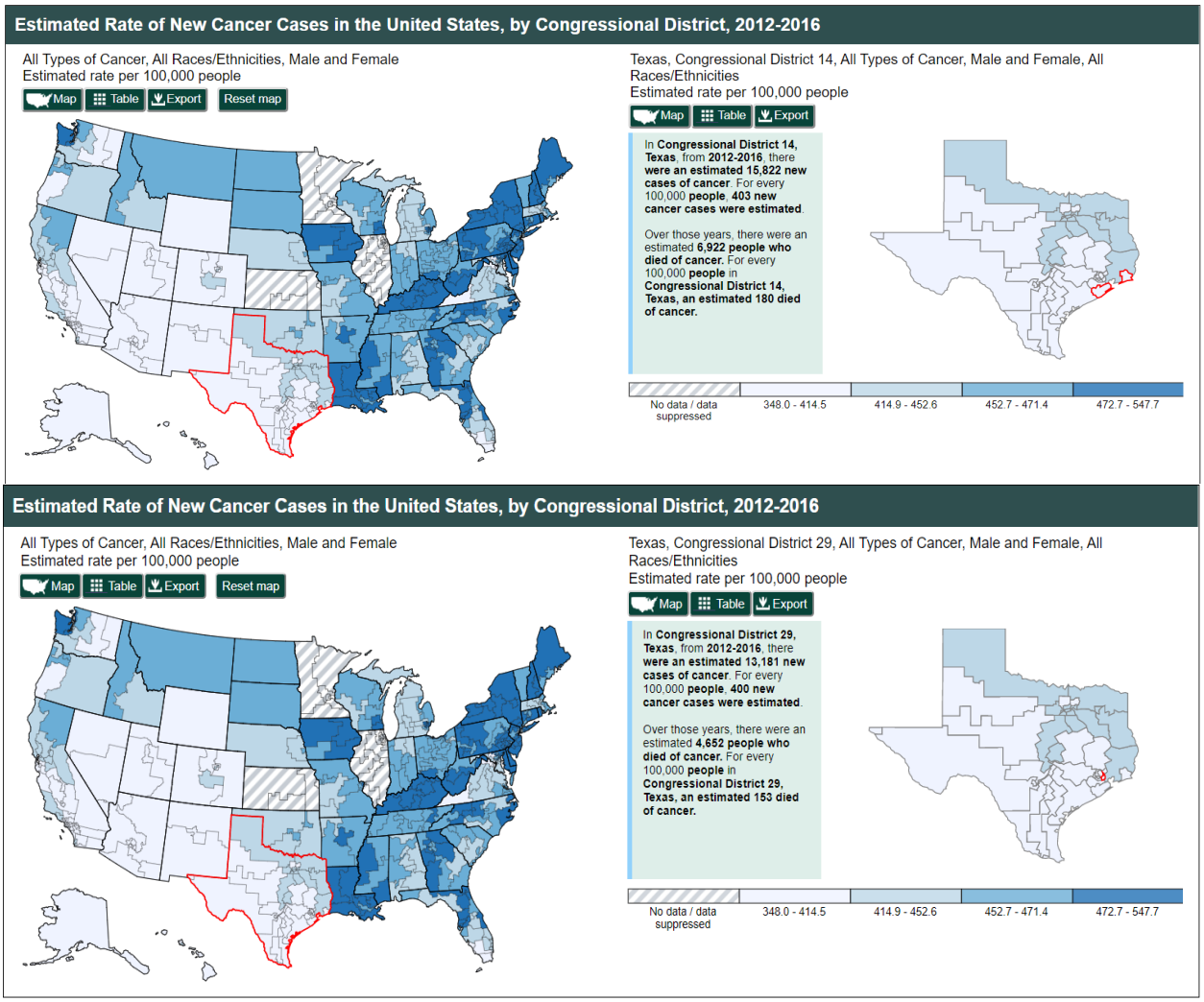




[32] Marathon, Detroit Refinery, https://www.marathonpetroleum.com/Operations/Refining/Detroit-Refinery/

[33] Energy Information Administration, Refiners' Total Operable Atmospheric Crude Oil Distillation Capacity as of January 1, 2019, https://www.eia.gov/petroleum/refinerycapacity/table5.pdf

[34] CDC, Cancer rates by congressional district, https://gis.cdc.gov/Cancer/USCS/DataViz.html



IV. Conclusion

The SAFE enforces the Energy Policy and Conservation Act's preemption of state laws and regulations "related to" fuel economy. That does not infringe any valid "right" of California to be a "laboratory of democracy." California has no statutory right to regulate fuel economy, and no sovereign right under our federal system to dictate fuel economy policy outside its borders.

The SAFE rule's revocation of the 2013 California waiver is unprecedented but only because the unlawful arrangement it terminates began when the prior administration broke precedent and deputized a state to regulate fuel economy. The district courts that ruled in favor of California's GHG motor vehicle standards did not understand the nature of preemption. EPCA rendered California's standards null and void years before CARB asked EPA to review them.

The claim that California must control Detroit because automakers are producing cars people don't want gets things exactly backwards. Only vehicles with low consumer demand require mandates and subsidies in order to "compete."

The SAFE rule's fuel economy rollbacks will not adversely affect quality, as they do not change vehicle air pollution emission standards. Rather, the SAFE rule may accelerate air quality improvement by making new, cleaner vehicles more affordable. Moreover, in some markets or jurisdictions, the energy consumption and mining activities required to produce EV batteries may make so-called clean cars dirtier than today's low-emission gasoline-powered vehicles.

If air pollution were the key factor in asthma prevalence, as commonly assumed, asthma rates should be going down and exacerbations should be higher in the summer than in the fall. Instead, asthma prevalence rates have increased as air pollution has decreased, and summer driving season, when ozone levels peak, has the lowest seasonal rate of asthma exacerbations.

Allegations that Marathon's Detroit refinery are responsible for asthma and cancer in Michigan District 13 are highly implausible. The Detroit refinery accounts for only 3 percent of local industrial emissions, and Texas, a state with many more and larger refineries, has significantly lower rates of asthma and cancer.