

February 25, 2020

Paul Ray
Acting Administrator
Office of Information and Regulatory Affairs
Office of Management and Budget
Eisenhower Executive Office Building
1650 Pennsylvania Avenue NW
Washington, D.C. 2050
Via Hand Delivery

Re: U.S. Environmental Protection Agency & National Highway Traffic Safety Administration Final Rule, Part Two, on the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks, RINs 2060-AU09 and 2127-AL76.

Dear Acting Administrator Ray:

On behalf of the California Air Resources Board (CARB), Chief Technology Officer Michael McCarthy, Assistant Chief Counsel Craig Segall, our colleagues on the phone, including Senior Attorney Pippin Brehler, and myself, thank you for meeting with us today.

The SAFE Rule suffers multiple flaws, several of which are fatal under the substantive and procedural requirements for agency action. The Rule is antithetical to good government principles and the statutory mandates governing the agencies proposing it. It increases costs for consumers, kills jobs, gives foreign manufacturers a competitive advantage, and threatens public health and the environment.

The Office of Information and Regulatory Affairs must ensure the regulatory system:

[P]rotect[s] public health, welfare, safety, and our environment while promoting economic growth, innovation, competitiveness, and job creation. It must be based on the best available science. It must allow for public participation and an open exchange of ideas. It must promote predictability and reduce uncertainty. It must identify and use the best, most innovative, and least burdensome tools for achieving regulatory ends. It must take into account benefits and costs, both quantitative and qualitative.

Executive Order No. 13563, Improving Regulation and Regulatory Review, 76 Fed. Reg. 3,821 (Jan. 18, 2011), cited in 5 U.S.C.A. § 601, (West).

The SAFE Rule does none of these things. We write to emphasize the points we raised with you in our meeting today, including those below.

Major Process Failures

Initially, the Rule's many flaws reflect deeply flawed consultation processes. The agencies proposing the rule have repeatedly ignored requests for information and have failed to learn from public comment. The U.S. Environmental Protection Agency and Department of Transportation shortchanged public review and comment. CARB, and many others, requested additional time to comment on the proposal but the agencies denied these requests.¹ This necessitated numerous supplemental comments following the end of the published comment period as flaw after flaw emerged on further analysis.²

Similarly, CARB and many others requested additional information from the agencies explaining the basis for the SAFE Vehicles. Those requests were denied in significant parts, including regarding the costs of clean technologies and the potential safety impacts of emissions and fuel economy standards. This compelled CARB (and others) to sue to ensure the agencies met their obligations under the Freedom of Information Act.³ To date, the federal agencies have given inconsistent and contradictory explanations that fail to show they searched for the requested documents or provide any legal reason to withhold the requested records.

The agencies likewise fell short of coordinating within and outside the federal government. Our understanding is that U.S. EPA experts, for instance, repeatedly raised serious questions about the integrity of the Rule (some of which have been preserved in the record), but were denied access to many critical decisions and materials, with many technical decisions being made instead by political staff or by the non-expert staff at the Department of Transportation. This departure from standard agency decision-making to reach starkly incorrect and politically motivated results is gravely concerning and needs your Office's correction.

Moreover, the agencies wholly failed to consult with the states affected by the proposal, as required under Executive Order 13,132 (64 Fed. Reg. 43,255 (Aug. 4, 1999)). This failure is especially troubling given Congress's commitment to cooperative federalism in the Clean Air Act, and the dependence of many state programs for

¹ See, e.g., Letter from States of California, Connecticut, Delaware, Iowa, Illinois, Maine, Maryland, Massachusetts, Minnesota, New Jersey, New York, North Carolina, Oregon, Pennsylvania, Rhode Island, Vermont, Washington, and the District of Columbia, to Andrew Wheeler, Acting Administrator, U.S. Environmental Protection Agency, Heidi King, Deputy Administrator, National Highway Traffic Safety Administration, Aug. 27, 2018; Letter from Chris Nevers, Vice President, Auto Alliance, to Andrew Wheeler, Acting Administrator, U.S. Environmental Protection Agency, Heidi King, Deputy Administrator, National Highway Traffic Safety Administration, Sept. 6, 2018.

² See, e.g., the supplemental comments of the California Air Resources Board (CARB), enclosed.

³ See *California Air Resources Board v. U.S. Environmental Protection Agency, National Highway Traffic Safety Administration*, No. 1:19-cv-00965-CKK, D. D.C.

meeting federal and state air quality requirements and GHG targets on vehicle standards. The Rule, and its associated preemption of state programs, is contrary to this Congressional direction. It was particularly egregious to decline to consult with CARB, the congressionally-regulated co-regulator of vehicle emissions, and a long-time close partner with the federal government on these efforts through administrations of both parties.

As worsened by this lack of consultation, the agencies also failed to meet their obligations for sound decision-making under the Information Quality Act.⁴ The agencies have failed to conduct an adequate inter-agency review and have stifled objective evaluation of its merits.⁵ To our knowledge, they have not fully responded to Congressional requests for information about the Rule, U.S. EPA analyses of the Rule, and who it actually benefits.⁶

Major Substantive Flaws

Extensive public comments – and several peer-reviewed papers – have documented the myriad of ways in which the SAFE Rule is unmoored from the facts and the record. We highlight some (but certainly not all) of the critical errors here.

At the most basic technical rule, the SAFE Rule did not, and does not, make sense. The Rule was grounded on erroneous analysis that reversed multiple federal technical findings in a full mid-term review of the program, constructing spurious costs on the basis of models that were not subject to peer review and which have been savaged by independent scientists. The Rule's analysis was rooted in fiction.

Economically, the SAFE Rule goes backwards – even when some of these errors are corrected. Part Two – the rollback before the Office now -- will raise costs for consumers and eliminate jobs by making cars more polluting and less efficient. As CARB said in its previous letter, the federal agencies' own estimates show the SAFE Rule would increase fuel consumption by 500,000 barrels every day and lead to a net loss of jobs.⁷ As Senator Thomas R. Carper has written you regarding this Rule, it would impose more than \$40 billion in costs on the U.S. economy. This shift in wealth

⁴ See Letter from the Attorneys General of New York, Colorado, Connecticut, Delaware, Maine, Maryland, Massachusetts, New Jersey, Oregon, Pennsylvania, Vermont, and Washington, to Administrator Andrew R. Wheeler, U.S. Environmental Protection Agency, and Deputy Administrator Heidi King, National Highway Traffic Safety Administration, July 23, 2019, enclosed.

⁵ See Robinson Meyer, *The Atlantic*, 'We Knew They Had Cooked the Books' *The Trump administration's attempt to kill one of America's strongest climate policies has been a complete debacle*, February 12, 2020.

⁶ See Letter from Senator Thomas R. Carper and Representative Frank Pallone, Jr., to Administrator Andrew Wheeler, U.S. Environmental Protection Agency, May 23, 2019; Letter from Senator Thomas R. Carper, to Secretary Elaine Chao, U.S. Department of Transportation, December 19, 2018.

⁷ SAFE Rule, Notice of Proposed Rulemaking, 83 Fed. Reg. 42,986, 43,436 (Aug. 24, 2018).

from ordinary Americans to oil companies demonstrates that the Rule is intended to benefit the oil industry more than the American public.⁸

Moreover, the changing climate is imposing substantial costs on our economy. As the federal government has recognized, between 1980 and 2019, the United States has sustained 258 extreme weather events and climate disasters that have cost the U.S. economy over \$1.75 trillion and have directly killed 13,249 people.⁹ Over a quarter of those climate-caused economic impacts and deaths have been in just the last three years: over \$455 billion with 3,569 direct deaths between 2017 and 2019.¹⁰ By significantly increasing greenhouse gas emissions, Part Two will further magnify these economic impacts going forward. We have included an attachment to this letter listing a sample of the climate studies that further document this disaster.

When the Rule leads to higher operating costs, consumers will bear them. As the federal agencies recognize, these increased operating costs may lead consumers to purchase vehicles smaller than they otherwise would prefer, frustrating their ability to get the vehicles they want which are affordable to own and operate. If some forward-thinking manufacturers can offer cleaner vehicles and technologies for meeting emission standards in other markets, they may gain a competitive advantage over domestic manufacturers, further hurting the U.S. economy and job base.¹¹

Viewed alongside other actions of this federal administration, it becomes clear the SAFE Rule is not about what is best for America. It is part of an unfounded attack on programs that protect public health, just like the Department of Justice's now-abandoned and unfounded antitrust inquiry into manufacturers that want to build cleaner vehicles and the certainty of the existing regulatory program that supports them,¹² and numerous attacks on California's environmental programs.¹³

Ultimately, CARB is particularly concerned because the SAFE Rule will increase harmful air pollution – including but not limited to greenhouse gas emissions. As CARB detailed in its initial and supplemental comments, the SAFE Rule as proposed will increase harmful ozone-forming emissions of oxides of nitrogen by 328 tons per year by 2025 in the South Coast air basin.¹⁴ This will jeopardize California's ability to meet the health-based National Ambient Air Quality Standards for ozone. The federal agencies have not ensured the SAFE Vehicle Rule will not increase the severity or

⁸ See Letter from Senator Thomas R. Carper, to Administrator Paul Ray, Office of Information and Regulatory Affairs, January 22, 2020.

⁹ NOAA National Centers for Environmental Information (NCEI) U.S. Billion-Dollar Weather and Climate Disasters (2020). <https://www.ncdc.noaa.gov/billions/>

¹⁰ *Id.*

¹¹ See Brad Plumer, Nadja Popovich, *How U.S. Fuel Economy Standards Compare With the Rest of the World's*, New York Times, April 3, 2018 [international standards exceed U.S. standards].

¹² See Perry Grossman, *Trump's Reckless Attack on Automakers Could Backfire*, Slate, Sept. 10, 2019.

¹³ See Senator Thomas R. Carper, *New Trump Administration Lawsuit is Punitive*, Oct. 23, 2019.

¹⁴ California Air Resources Board comment, Docket No. EPA-HQ-OAR-2018-0283-7623.

frequency of California's exceedances of the ozone standards or delay attainment, contrary to their legal obligations. (Clean Air Act, § 176; 42 U.S.C. § 7506(c)(1); 40 C.F.R. § 93.153(b).) The climate change-inducing emissions caused by the Rule will accelerate warming temperatures, extreme climate events, and their associated effects (see studies in attachment to this letter). The draft Environmental Impact Statement does not meet NHTSA's obligations under the National Environmental Policy Act.¹⁵

Analyses from a wide range of sources agree this Rule, and the process the agencies followed to develop it, are broken. Although we anticipate the agencies may have attempted to correct some of the egregious errors of the Proposal, they have not presented these new efforts and rationales to the public – meaning that the final rule is likely not to be a logical outgrowth of the proposal and many of its supporting claims will not have been properly presented to the public, further violating the federal Administrative Procedure Act. Ultimately, the right answer here is clear and needs to be implemented by your Office: Scrap this profoundly flawed proposal and retain the federal program that, even now, is working to clean the air, benefit consumers, and protect the climate.

Illustrative Documents

At our meeting, we presented you with a DVD containing many exemplar documents demonstrating the damage that will come from the Rule and the broken process that produced it:

1. Letter from States of California, Connecticut, Delaware, Iowa, Illinois, Maine, Maryland, Massachusetts, Minnesota, New Jersey, New York, North Carolina, Oregon, Pennsylvania, Rhode Island, Vermont, Washington, and the District of Columbia, to Andrew Wheeler, Acting Administrator, U.S. Environmental Protection Agency, Heidi King, Deputy Administrator, National Highway Traffic Safety Administration, August 27, 2018 [requesting extension of SAFE Rule comment period].
2. Letter from Chris Nevers, Vice President, Auto Alliance, to Andrew Wheeler, Acting Administrator, U.S. Environmental Protection Agency, Heidi King, Deputy Administrator, National Highway Traffic Safety Administration, Sept. 6, 2018 [requesting extension of SAFE Rule comment period].
3. Comments of the California Air Resources Board on the SAFE Rule
4. Filings in *California Air Resources Board v. U.S. Environmental Protection Agency*, National Highway Traffic Safety Administration, No. 1:19-cv-00965-CKK, D. D.C., and similar requests under the Freedom of Information Act:
 - a) Memorandum Supporting Plaintiff's Motion for Summary Judgment and Statement of Material Facts as to which There is No Genuine Dispute

¹⁵ See Comment from States of California, Connecticut, Delaware, Hawaii, Iowa, Illinois, Main, Maryland, Minnesota, North Carolina, et. al., Oct. 26, 2018, Docket No. NHTSA-2017-0069-0625.

- b) Plaintiff's Opposition to Defendants' Cross-Motion for Summary Judgment & Reply Supporting Plaintiff's Motion for Summary Judgment
5. Letter from Andrea Issod, Senior Staff Attorney, Sierra Club Environmental Law Program, to National Freedom of Information Officer, U.S. Environmental Protection Agency, January 22, 2020 [requesting records related to U.S. EPA inquiries into California's environmental regulatory programs].
 6. Letter from the Attorneys General of New York, Colorado, Connecticut, Delaware, Maine, Maryland, Massachusetts, New Jersey, Oregon, Pennsylvania, Vermont, and Washington, to Administrator Andrew R. Wheeler, U.S. Environmental Protection Agency, and Deputy Administrator Heidi King, National Highway Traffic Safety Administration, July 23, 2019 [failure to consult with state officials].
 7. Robinson Meyer, *The Atlantic*, 'We Knew They Had Cooked the Books' *The Trump administration's attempt to kill one of America's strongest climate policies has been a complete debacle*, February 12, 2020.
 8. Letter from Senator Thomas R. Carper, to Secretary Elaine Chao, U.S. Department of Transportation, December 19, 2018 [covert oil industry lobbying to relax federal fuel economy and emissions standards]
 9. Letter from Senator Thomas R. Carper and Representative Frank Pallone, Jr., to Administrator Andrew Wheeler, U.S. Environmental Protection Agency, May 23, 2019 [U.S. EPA staff analysis of SAFE Rule].
 10. Letter from Senator Thomas R. Carper, to Administrator Paul Ray, Office of Information and Regulatory Affairs, January 22, 2020 [SAFE Rule Part Two].
 11. Brad Plumer, Nadja Popovich, *How U.S. Fuel Economy Standards Compare With the Rest of the World's*, *New York Times*, April 3, 2018 [international standards exceed U.S. standards].
 12. Perry Grossman, *Trump's Reckless Attack on Automakers Could Backfire*, *Slate*, Sept. 10, 2019.
 13. Senator Thomas R. Carper, *New Trump Administration Lawsuit is Punitive*, Oct. 23, 2019.
 14. National Academy of Sciences, *Valuing Climate Damages: Updating Estimation of the Social Cost of Carbon Dioxide (2017)* [noting the most recent Interagency Working Group on the Social Cost of Greenhouse Gases' estimate of the social cost of carbon is \$42 per metric ton in 2007 dollars, casting significant doubt on the ability to credibly establish a domestic-only social cost of carbon, and recommending further development and inclusion of various interactions and feedbacks in the human-climate system and better integration among the modules used to develop the social cost of carbon].
 15. Richter-Menge, J., Druckenmiller, M. L., and Jeffries, M., Eds., *NOAA Arctic Report Card 2019 (2019)*, https://arctic.noaa.gov/Portals/7/ArcticReportCard/Documents/ArcticReportCardjull_report2019.pdf

16. National Aeronautics and Space Administration, NASA, NOAA Analyses Reveal 2019 Second Warmest Year on Record (NASA News & Feature Releases), Jan. 15, 2020, <https://www.nasa.gov/press-release/nasa-noaa-analyses-reveal-2019-second-warmest-year-on-record>.
17. Scott Wilson, *2°C: Beyond the Limit – Fires, Floods and Free Parking: California’s Unending Fight Against Climate Change*, Wash. Post (Dec. 5, 2019), <https://www.washingtonpost.com/graphics/2019/national/climate-environment/climate-change-california/>.
18. Osborne, E.B., Thunell, R.C., Gruber, N. et al. Decadal variability in twentieth-century ocean acidification in the California Current Ecosystem. *Nat. Geosci.* (2019) doi:10.1038/s41561-019-0499-z.
19. Williams A.P., Abatzoglou J.T., Gershunov A., Guzman-Morales J., Bishop D.A., Lettenmaier D.P. (2019) Observed impacts of anthropogenic climate change on wildfire in California. *Earth’s Future*, 7. <https://doi.org/10.1029/2019EF001210>.
20. Northcott D., Sevadjian J., Sancho-Gallegos D.A., Wahl C., Friederich J., Chavez F.P. (2019) Impacts of urban carbon dioxide emissions on sea-air flux and ocean acidification in nearshore waters. *PLoS ONE* 14(3): e0214403. <https://doi.org/10.1371/journal.pone.0214403>.
21. Kelly E. Gleason, Joseph R. McConnell, Monica M. Arienzo, Nathan Chellman, Wendy M. Calvin. Four-fold increase in solar forcing on snow in western U.S. burned forests since 1999. *Nature Communications*, 2019; 10 (1) DOI: 10.1038/s41467-019-09935-y.
22. Zhu, Shupeng & Horne, Jeremy & Mac Kinnon, Michael & Samuelsen, G & Dabdub, Donald. (2019). Comprehensively assessing the drivers of future air quality in California. *Environment International*. 125. 10.1016/j.envint.2019.02.007.

We hope you consider this information before allowing the existing emission standards to be relaxed, when there is no sound basis. If you have questions following our meeting, I may be reached through my assistant, Ann Beegan, at Ann.Beegan@arb.ca.gov or (916) 323-9631. Thank you for your time.

Sincerely,

Steven S. Cliff, Ph. D.
Deputy Executive Officer
California Air Resources Board

Enclosure (DVD with items 1-22 listed above)
Attachment in following pages

Attachment of Climate Studies (see reference on page 4 of the letter)

Recent studies further documenting climate harms that the SAFE Rule will worsen, and documenting particularly strong harms to California, include:

- Richter-Menge, J., Druckenmiller, M. L., and Jeffries, M., Eds., NOAA Arctic Report Card 2019 (2019), https://arctic.noaa.gov/Portals/7/ArcticReportCard/Documents/ArcticReportCardjull_report2019.pdf [collection of essays comprehensively summarizing observed land, ice, ocean, and atmospheric climate change impacts in the Arctic. For example, scientists have recorded a shift in fish distribution over the past two years in the eastern Bering Sea, an area that supports “more than 40% of the annual U.S. catch of fish and shellfish (valued at >\$1 billion annually).” Climate change-caused warmer ocean temperatures and less sea ice are changing the Bering Sea ecosystem and driving these valuable fisheries northward.]
- National Aeronautics and Space Administration, NASA, NOAA Analyses Reveal 2019 Second Warmest Year on Record (NASA News & Feature Releases), Jan. 15, 2020, <https://www.nasa.gov/press-release/nasa-noaa-analyses-reveal-2019-second-warmest-year-on-record>. [Recent temperature data analyses by NASA and NOAA underscore that rapid, significant warming is occurring now, with both agencies finding that 2019 was the second-hottest year on record, below only 2016. The analyses also show that the past five years are the five hottest years since recordkeeping began.]
- Scott Wilson, 2°C: Beyond the Limit – Fires, Floods and Free Parking: California’s Unending Fight Against Climate Change, Wash. Post (Dec. 5, 2019), <https://www.washingtonpost.com/graphics/2019/national/climate-environment/climate-change-california/>. [Wilson analyzed monthly temperature data from the National Oceanic and Atmospheric Administration at the national, state, and county levels between 1895 and 2018 for the lower 48 states, from which he calculated annual mean temperature trends in each state and county using linear regression. Based on this assessment, Wilson found that “the coastal curve that bends south from Santa Barbara through the Los Angeles metroplex to the arroyos along the Mexican border is warming at double the rate of the continental United States” (emphasis added). And, Wilson concluded, “during the past five years, the pace has accelerated.” Ventura County, which has warmed by 2.6 degrees Celsius since preindustrial times, “ranks as the fastest-warming county in the Lower 48 states.”]
- Osborne, E.B., Thunell, R.C., Gruber, N. et al. Decadal variability in twentieth-century ocean acidification in the California Current Ecosystem. *Nat. Geosci.* (2019) doi:10.1038/s41561-019-0499-z. [The authors analyzed the carbonate in almost 2,000 foraminifera shells collected from core samples of the sea floor off Santa Barbara and used a radioisotope-based model to reconstruct a 100-year history of ocean acidification for this area. Generally, the more acidic ocean water becomes, the less carbonate organisms like foraminifera have in their shells, as carbonate more readily dissolves in lower pH. Based on this analysis, the authors found that these waters off California’s coast have seen a 0.21 decline in their pH since 1895—which is over twice the estimated global pH decline of 0.1. Moreover, the authors “attribute the long-term reduction in [carbonate, resulting from increased acidification] largely to air-sea exchange of anthropogenic CO₂.”]
- Williams A.P., Abatzoglou J.T., Gershunov A., Guzman-Morales J., Bishop D.A., Lettenmaier D.P. (2019) Observed impacts of anthropogenic climate change on wildfire in California. *Earth’s Future*, 7. <https://doi.org/10.1029/2019EF001210>. [Williams et al. (2019) found that annual burned area in California increased by 405 percent during 1972–2018. This was significantly driven by increases in burned area in the North Coast and Sierra Nevada forest regions, which respectively saw increases of 630 percent and 618 percent. In analyzing the data and past trends, the authors conclude: “The large increase in California’s annual forest-fire area over the past several decades is very likely linked to

anthropogenic warming” (emphasis in original). Specifically, the authors found that the increasing vapor pressure deficit, a climate variable that measures the air’s dryness and is a function of temperature and specific humidity, has mainly driven the increase in summer burned area in California, particularly in the North Coast and Sierra Nevada regions. Higher vapor pressure deficits mean drier air and drier vegetation, and this is expected to increase with a changing climate. The authors warn that if greenhouse gas emissions are not curbed, the damage from wildfires in California will continue to magnify exponentially.]

- Northcott D., Sevadjian J., Sancho-Gallegos D.A., Wahl C., Friederich J., Chavez F.P. (2019) Impacts of urban carbon dioxide emissions on sea-air flux and ocean acidification in nearshore waters. PLoS ONE 14(3): e0214403. <https://doi.org/10.1371/journal.pone.0214403>. [The authors collected data on CO2 concentrations over Monterey Bay (which is home to a national marine sanctuary, significant fisheries, and globally important ecosystems). The data document, for the first time, that CO2 concentrations over ocean waters ebb and flow throughout the day, often peaking in the early morning – showing that a previously common scientific assumption that CO2 concentrations over ocean waters do not vary much over time and space does not always hold true. Given the unique topography surrounding Monterey Bay, the area’s winds and other atmospheric conditions in the early morning appear to concentrate CO2 over the Bay. The study concludes that this previously undocumented process could increase the amount of CO2 that coastal waters are absorbing by about 20 percent. The more CO2 dissolved in the oceans, the more acidic the ocean becomes. Northcott et al. (2019) indicates these impacts are likely to accrue faster than and not be as evenly distributed as previously anticipated.]

- Kelly E. Gleason, Joseph R. McConnell, Monica M. Arienzo, Nathan Chellman, Wendy M. Calvin. Four-fold increase in solar forcing on snow in western U.S. burned forests since 1999. *Nature Communications*, 2019; 10 (1) DOI: 10.1038/s41467-019-09935-y. [Gleason et al. (2019) documents a unique feedback loop in western forests that exacerbates climate-driven water impacts and wildfire risk. In studying the albedo of snow in several areas between 1 and 15 years after a wildfire, the authors found that, over the last 20 years, there has been more than a four-fold increase in the amount of energy absorbed by snowpack because of fires across the western U.S. As a result, more than 11 percent of western forests are already experiencing earlier snowmelt because of increased wildfires. For western states that rely on snowpack and its runoff into local streams and reservoirs, earlier snowmelt is a major concern, as the volume of snowpack and the timing of snowmelt are potent drivers of the presence and magnitude of summer drought – which then influences the frequency and degree of wildfires. Climate change is already melting snowpack and increasing wildfires on its own. This feedback loop – wildfires expediting snowmelt, which then amplifies the frequency and magnitude of wildfires – will only be magnified as the climate continues to change, and will also further magnify the climate impacts.]

- Zhu, Shupeng & Horne, Jeremy & Mac Kinnon, Michael & Samuelsen, G & Dabdub, Donald. (2019). Comprehensively assessing the drivers of future air quality in California. *Environment International*. 125. 10.1016/j.envint.2019.02.007. [Indeed, the impact of climate change may result in current emission mitigation planning strategies failing to achieve targeted outcomes including compliance with regulatory standards and avoidance of societal and economic costs from human exposure. This outcome is more pronounced for the summer ozone period, indicating that strategies to reduce ozone precursor emissions may need to be considered seasonally, i.e., greater reductions targeted during summer periods.]