Consequences of Regulatory Changes on the Economy and the Environment

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March 5, 2019
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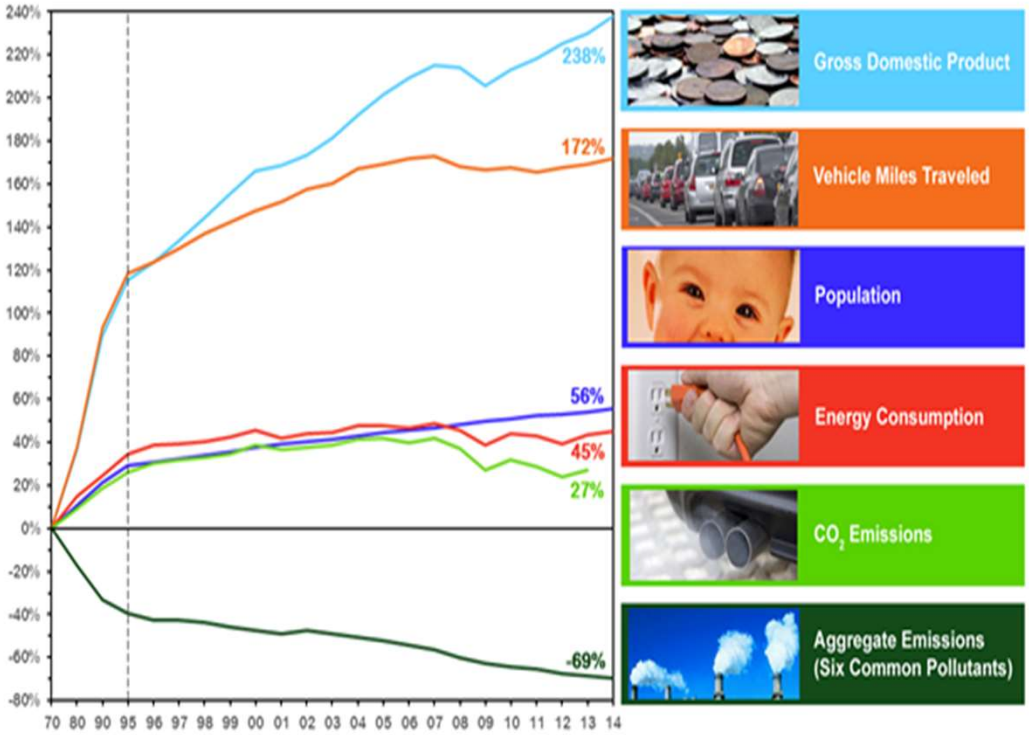
The Benefits and Costs of the Clean Air Act from 1990 to 2020




U.S. Environmental Protection Agency
Office of Air and Radiation
March 2011

SUMMARY REPORT

Comparison of Growth Areas and Emissions, 1970-2014



Executive Summary
Request for Determination Regarding Termination of the One-Hour Ozone Section 185 Fee Obligation

Background

The Federal Clean Air Act (FCAA), Section 182(d)(3) and (e) and Section 185, require each state to impose a requirement for the assessment and collection of a fee for major stationary sources of volatile organic compounds (VOC) and nitrogen oxides (NO_X) located in a severe or extreme nonattainment area if the area fails to attain the ozone National Ambient Air Quality Standard (NAAQS) by the applicable attainment date. The eight-county (Brazoria, Chamber, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller) Houston-Galveston-Brazoria (HGB) area is classified as severe for both the one-hour ozone NAAQS and the 1997 eight-hour ozone NAAQS.

The United States Environmental Protection Agency (EPA) memorandum issued on January 5, 2010, entitled "Guidance on Developing Fee Programs Required by Clean Air Act Section 185 for the 1-hour Ozone NAAQS" states that if EPA determines that an area is attaining either the one-hour or the 1997 eight-hour ozone NAAQS, based on permanent and enforceable emissions reductions, the area would no longer be obligated to submit a fee program state implementation plan (SIP) revision to satisfy the anti-backsliding requirements associated with the transition from the one-hour standard to the 1997 eight-hour standard. Attachments A through E document that data for 2007 through 2009 show that the HGB area is monitoring attainment of the 1997 eight-hour ozone standard, and attainment is due to permanent and enforceable emission reductions.

Summary of Attachments

Attachment A: Data Demonstrating Compliance

Attachment A contains a table that displays the eight-hour ozone design values for the HGB area since 1991 and a copy of the data certification letter dated March 22, 2010. With a design value of 84 parts per billion (ppb) in 2009, the HGB area monitored attainment of the 1997 eight-hour ozone NAAQS of 0.08 parts per million (ppm)[1]. The HGB area's 2009 eight-hour ozone design value of 84 ppb was a 7.7 percent decrease from 2008 (91 ppb) and a 29.4 percent drop since 1991 (119 ppb).

Attachment B: Economic Analysis

The national economic recession that began in late 2007 was not detectible in data for Texas or the HGB area until late 2008. Therefore, attainment of the 1997 eight-hour ozone NAAQS in 2009, which includes ozone measurements from 2007 and 2008, could not have been due to a reduction in economic activity in those years. In fact, the HGB area exhibited the highest economic activity of any three-year period on record during the 2007 through 2009 time period. Over the previous two decades, ozone concentrations and economic growth have rarely been correlated in the HGB area: many of the years that saw robust economic growth coincided with declines in the eight-hour and one-hour ozone design values. Attachment B demonstrates two results regarding ozone and the economy using published economic and ozone data. First, because the HGB area did not experience a reduction in economic activity until late 2008, ozone reductions observed in 2007 through 2008 could not have been influenced by economic contraction and were observed during a period of robust economic expansion in the region. Second, the HGB area has consistently reduced ozone concentrations during two consecutive

Policy Brief

Facilitating Retrospective Analysis of Environmental Regulations

Maureen L. Cropper,* Richard D. Morgenstern,† and Nicholas Rivers‡

Why Is Retrospective Analysis Important?

It is common practice for governments to assess the efficiency and effectiveness of prospective environmental regulations through ex ante analysis prior to implementation. In the United States, for example, environmental regulations are evaluated using regulatory impact analysis (RIA), which projects both the costs and benefits associated with a proposed rule. For regulations designed to limit pollution emissions or discharges (hereafter referred to as emissions), RIAs generally entail four steps: (1) estimating emissions with and without the rule, (2) translating the change in emissions into environmental outcomes, (3) estimating the benefits associated with the expected change in environmental outcomes, and (4) estimating the costs of the regulation relative to the no-regulation baseline. Conducting an RIA requires predicting the state of the world with and without the regulation, both of which are inherently uncertain.

After a regulation is implemented, the methods used by firms, consumers, and other regulated entities to comply with the rule, as well as actual emissions and costs, can, in principle, be observed. Although the counterfactual no-regulation baseline can never be observed for regulated entities, there are cases in which it can be inferred from a control group of similar, unregulated entities. Thus, in principle, it is possible to evaluate some (or all) of the four steps in RIAs retrospectively (i.e., ex post).

Why is retrospective analysis important? First, it is important to investigate whether the regulation had the intended impact on emissions and environmental outcomes. Establishing a causal impact on environmental outcomes is a necessary condition for ensuring that regulations are achieving their desired objectives. Moreover, if a regulation was *not* fully effective in achieving its intended objectives, retrospective analysis can help to reveal the factors that were responsible for the regulation's failure. This information can be used to improve both the design of future regulations and ex ante RIAs. Second, it is important to measure the actual costs of a regulation. Actual costs may differ from ex ante estimates

EPA: An Aggressive Agenda to Gut Public Health Protections

- Chemical Disaster Safety

Photo accessed:
https://www.google.com/search?q=images+from+arkema+blast&tbm=isch&tbo=u&source=univ&sa=X&ved=0ahUKEwivhOCjxIDXAhUl5IMKHeGBDWEQ7AkIRA&biw=1366&bih=672#imgrc=XQUbQnOHtm2CrM

EPA: An Aggressive Agenda to Gut Public Health Protections

- Super-Polluting Trucks Waiver

Scott Pruitt gave "super polluting" trucks a gift on his last day at the EPA. A court just put it on hold.

Pruitt secured a loophole for dirty glider trucks after he announced his resignation.

By Umair Irfan | Updated Jul 18, 2018, 6:07pm EDT

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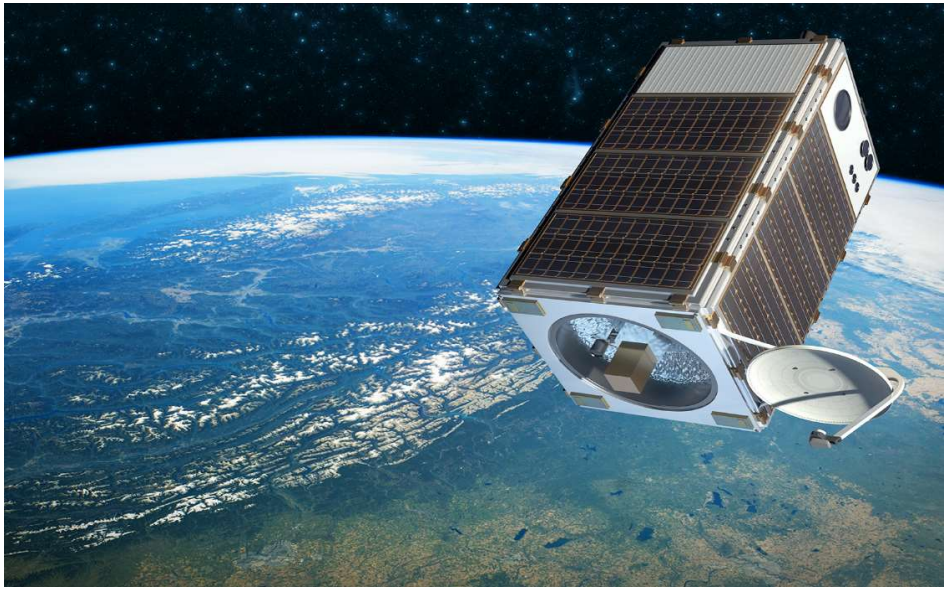
EPA: An Aggressive Agenda to Gut Public Health Protections

- Methane Leak Controls



https://www.edf.org/approach/fourth-wave/satellite-ted-talk

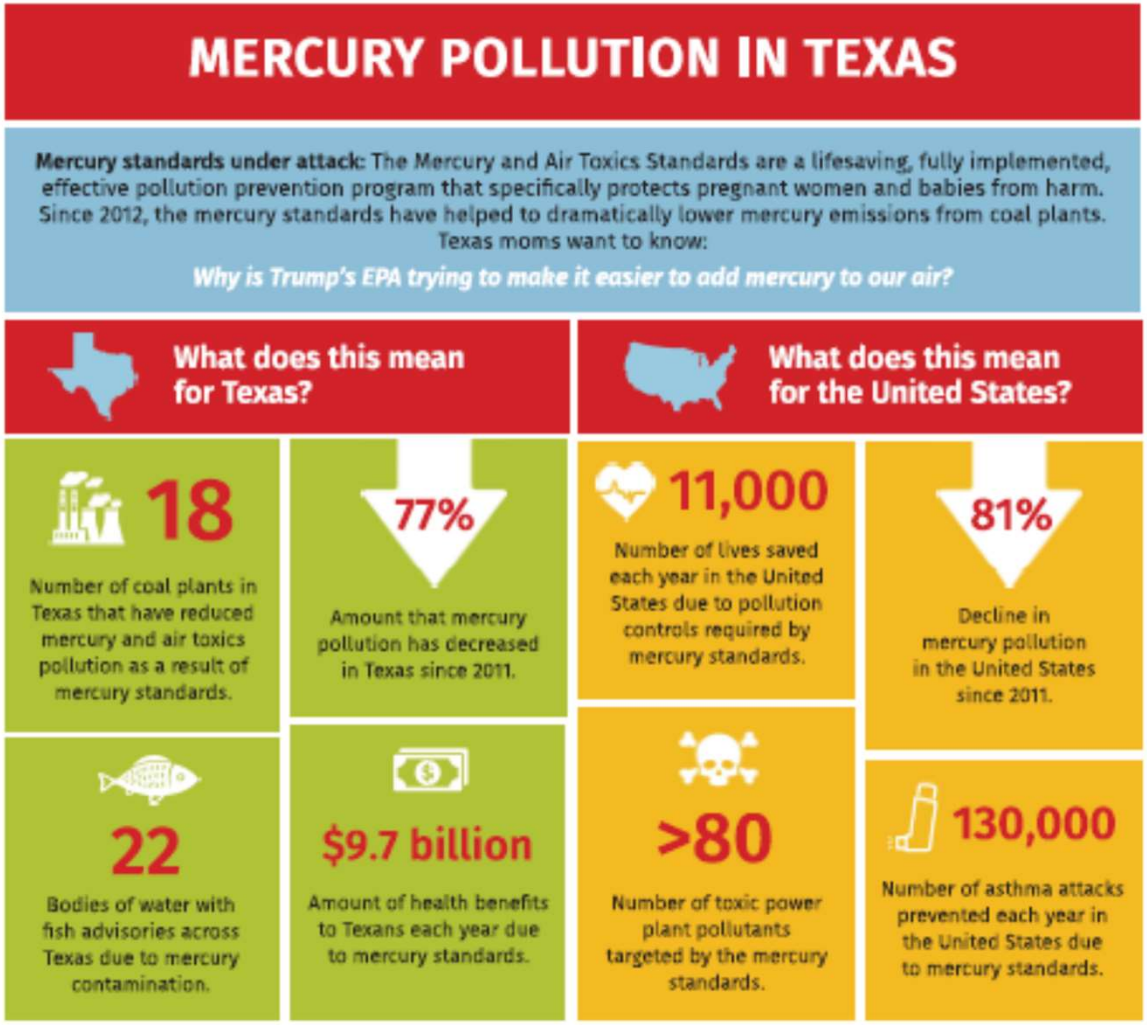
Exxon urges EPA to maintain methane rules

James Osborne

Dec. 20, 2018 | Updated: Dec. 20, 2018 1:15 p.m.

EPA: An Aggressive Agenda to Gut Public Health Protections

- Mercury Air Toxics Standards



EEI Edison Electric INSTITUTE · NRECA America's Electric Cooperatives · AMERICAN PUBLIC POWER ASSOCIATION Powering Strong Communities · The Clean Energy Group · CLASS OF '85 REGULATORY RESPONSE GROUP

July 10, 2018

The Honorable William L. Wehrum
Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency
1200 Pennsylvania Ave, NW
Washington, DC 20460

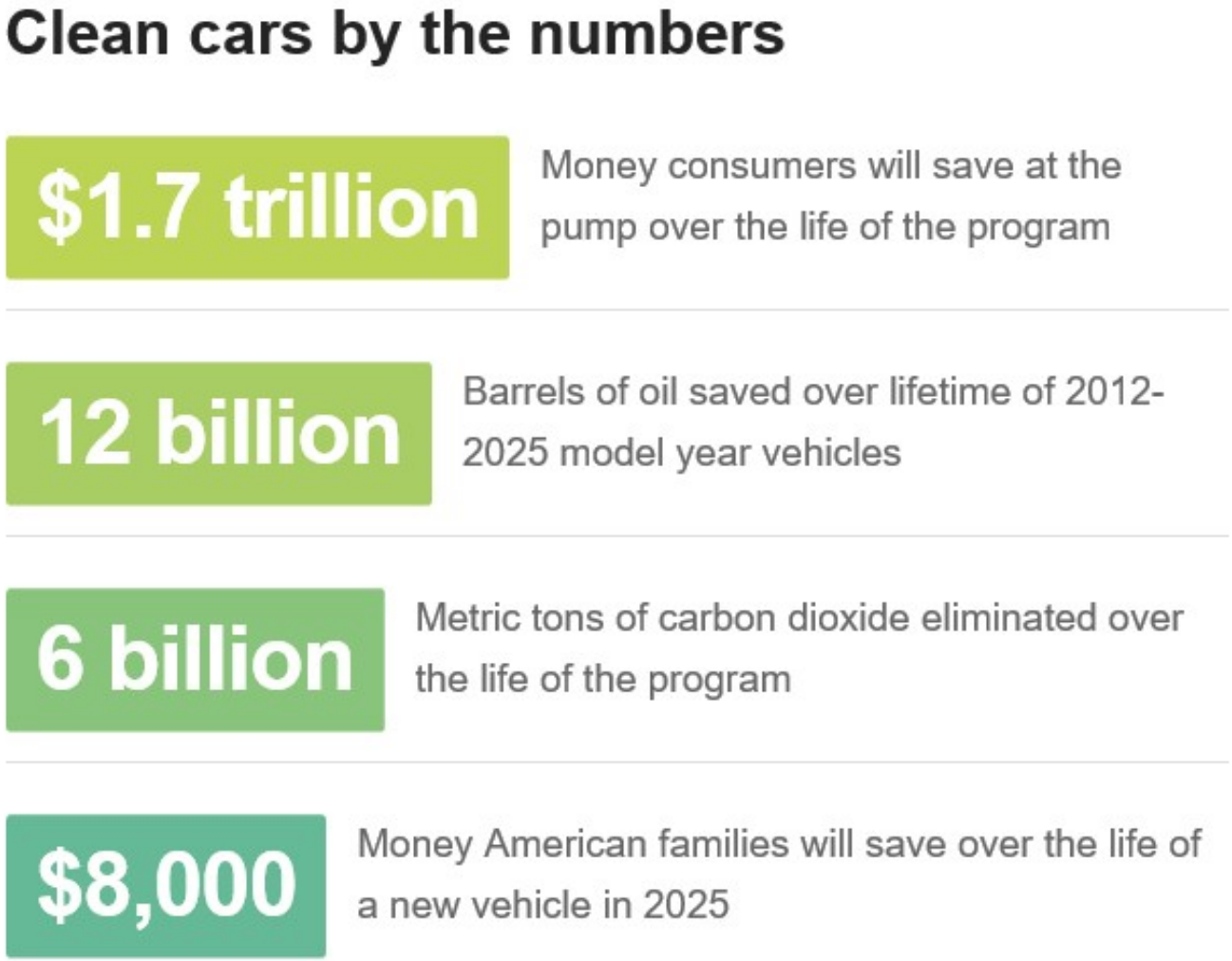
Dear Assistant Administrator Wehrum:

The Environmental Protection Agency (EPA or Agency) has indicated to the U.S. Court of Appeals for the District of Columbia Circuit its intent to address the Agency's Final Supplemental Finding for the Mercury and Air Toxics Standards (MATS) in which EPA determined that it was appropriate and necessary to regulate coal- and oil-based power plants under Clean Air Act (CAA) section 112 (Supplemental Finding). 81 *Fed. Reg.* 24,419 (Apr. 25, 2016). EPA's supplemental finding followed the Supreme Court's decision in *Michigan v. EPA*, which held that EPA must consider costs in evaluating whether it is appropriate and necessary to regulate.[1]

Driven by several factors—including customer demands, technology developments, and federal and state regulatory obligations—the electric power sector is undergoing a transition of its electric generating fleet that will continue over the next decade and beyond. Concurrent with this transition, electric companies, public power utilities, and electric cooperatives are making significant investments to make the energy grid smarter, cleaner, more dynamic, more flexible, and more secure in order to integrate and deliver a balanced mix of central and distributed energy resources.

EPA: An Aggressive Agenda to Gut Public Health Protections

- Clean Car Standards



U.S.

After Oil Refinery Is Damaged by Harvey, Benzene Is Detected in Houston Area

City and EPA investigate potentially dangerous plume after Valero Energy Partners reported leak tied to hurricane

An aerial view of the Valero Houston Refinery is seen in Houston, Texas, U.S. August 31, 2017. REUTERS/Adrees Latif Published Credit: adrees

High Levels of Carcinogen Found in Houston Area After Harvey

A Valero Energy refinery in Houston on Thursday. High levels of the carcinogen benzene were detected near the refinery, health officials said. Adrees Latif/Reuters

By Hiroko Tabuchi

Sept. 6, 2017

Harvey makes landfall near Port Aransas and moves north toward Houston. The region receives over 5 feet of rain within 5 days.

City of Houston receives odor complaints. EDF coordinates with City officials to deploy mobile monitoring unit from CA.

EPA won't release benzene levels collected post-Harvey; private tests show elevated levels

Environmental groups hired a private firm after the flooding and found higher than normal levels of dangerous chemicals in the air around a refinery.

BY KIAH COLLIER, THE TEXAS TRIBUNE AND LISA SONG AND AL SHAW, PROPUBLICA
SEPT. 14, 2017 3 PM

EPA tells Houston Chronicle that Valero significantly underreported emissions (shortly before ProPublica article is published).

TCEQ

U.S. Environmental Protection Agency (USEPA) Environmental Response Team Trace Atmosphere Gas Analyzer (TAGA) Post-Harvey Monitoring Houston, Corpus Christi, and Beaumont Areas, TX

October 9, 2017

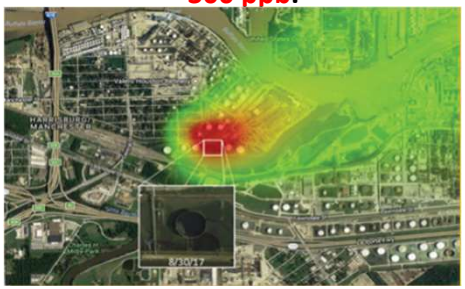
TCEQ releases a summary of EPA's monitoring results, 39 days after resident concerns.

Conference call with EPA, EDF, and City of Houston to discuss situation. Concentrations remain elevated but not as high.

Aug 25	Aug 27	Aug 31	Sept 4	Sept 5	Sept 6	Sept 14	Sept 15	Sept 27	Oct 9

Valero files initial report to TCEQ indicating excess benzene emissions of 6.7 pounds. Valero in daily communication with TCEQ. TCEQ never takes a single measurement.

EDF and City of Houston take independent measurements. Benzene concentrations in Manchester exceed 300 ppb.



EDF releases air quality health alert.

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Matthew Tresaugue, (713) 392-7888, mtresaugue@edf.org

Air quality remains a concern after Harvey despite claims from EPA officials

Statement from EDF's Dr. Elena Craft, senior health scientist

(HOUSTON – Sept. 4, 2017) The Environmental Protection Agency released a statement Sunday that "local residents should not be concerned about air quality issues related to the effects of the storm." Yet the Houston area was under alert for ground-level ozone, a lung-damaging air pollutant, for the fourth day in a row, according to the EPA's Air Now website.

EPA takes measurements in Manchester but does not release data to public.

EPA demands that Valero release reports related to the release.

Valero files final emissions report with the state revising their emission estimate to 1881 pounds. Valero never released a public statement.

Where Texas Can Do a Better Job

- Transparency

Post-Hurricane Harvey, NASA tried to fly a pollution-spotting plane over Houston. The EPA said no

By SUSANNE RUST and LOUIS SAHAGUN MAR 05, 2019 | 3:00 AM

A NASA-operated DC-8 stationed in Palmdale is used to collect and analyze atmospheric samples from around the world. The plane was not used to analyze pollution data in the aftermath of Hurricane Harvey. (Al Seib / Los Angeles Times)

LATEST CALIFORNIA

California attorney general agrees: No charges for officers in Stephon Clark case

"Monitors are showing that air quality at this time is not concerning, and residents should not be concerned about air quality issues related to the effects of the storm."

- Priorities

Prioritize surveillance and monitoring

Spend money on initiatives that will result in improved air quality

Correct issues with accessing air monitoring data and emissions data

Review risk management plans

- Enforcement

Breakdowns in Enforcement

Texas Rarely Penalizes Industry for Illegal Air Pollution Released During Malfunctions and Maintenance

JULY 7, 2017

ENVIRONMENTAL INTEGRITY PROJECT

ENVIRONMENT TEXAS