

United States Senate

WASHINGTON, DC 20510

August 16, 2018

Attention: Docket ID No. EPA-HQ-OA-2018-0259
"Strengthening Transparency in Regulatory Science"

Re: Comments on EPA's Proposed Rule Excluding Important Scientific
Studies From EPA Rulemaking

I. Introduction

The proposed rule is the product of the regulatory capture of the Environmental Protection Agency (EPA) by a regulated industry. Fossil fuel companies, along with the tobacco industry, have for decades sought to limit the types of scientific studies available for use in rulemaking to avoid regulation of their products. After years of funding a network of front groups to lead this attack on regulations supported by peer reviewed science, the fossil fuel industry installed loyalists throughout EPA, including former Administrator Scott Pruitt and current Acting Administrator Andrew Wheeler. Now fully captured by the industries it regulates, EPA has effectively delegated its regulatory authority to those interests. The proposed rule is just the latest item on industry's wish list.

This comment documents the long history of the tobacco and fossil fuel industries' attack on what they creatively called "secret science," and the deep and broad ties these industries have to those who advocate for this proposed rule today. It illustrates how the proposed rule has no support from independent scientists, but instead reveals a patently self-serving attempt by industry to evade regulation designed to protect public health. In sum, this comment demonstrates that EPA has proposed a rule that is arbitrary and capricious, serves the interests of the fossil fuel industry not the public, and is an illegal delegation of its rulemaking authority.

II. Facts

A. EPA's Proposal is the Brainchild of the Tobacco and Fossil Fuel Industries

On April 30, 2018, EPA issued a proposed rule it titled "Strengthening Transparency in Regulatory Science." This rule states that "when EPA develops regulations, including regulations for which the public is likely to bear the cost of compliance, with regard to those

scientific studies that are pivotal to the action being taken, EPA should ensure that the data underlying those are publicly available in a manner sufficient for independent validation.”¹

This supposed concern for “data [that] are publicly available” masks a strategy to eliminate studies based on individual health records. Public health studies are often founded in the health experience of the public, unsurprisingly. Individuals’ health records are an important source of information, but are not normally exposed to the public in the interest of patient privacy. Peer review customarily assures that this privacy is not abused.

Attempting to require the government to use only studies with publicly accessible data in its rulemaking, and thereby eliminating the most credible science based on actual health information, is a well-documented strategy with roots in the tobacco and fossil fuel industries.

During the mid-1990s, the tobacco industry and its lawyers and lobbyists strategized about changing the rules governing the use of science in agency rulemaking. Christopher Horner, then a lobbyist for the law firm Bracewell and Patterson (now Bracewell), wrote a memo in 1996 to his client, R.J. Reynolds, outlining a strategy for how to head off future regulation of secondhand tobacco smoke. In this memo, Horner acknowledged that R.J. Reynolds has “virtually no chance” of stopping such a regulation unless the company is able to exercise “behind the scenes leadership” in “construct[ing] explicit procedural hurdles [EPA] must follow in issuing scientific reports.”²

Horner’s recommended approach to constructing these procedural hurdles is strikingly similar to EPA’s proposed rule. Horner advised that R.J. Reynolds advocate for what he termed “sound science” criteria in rulemaking, requiring the data underlying any study to be publicly available and that a study’s results be reproducible.³ Horner further recommended that such a rule be implemented via either an EPA rulemaking or new legislation.⁴

Horner suggested that oversight hearings on EPA’s rulemakings to limit fine particulate matter (PM 2.5) and ozone serve as the congressional entry point for the tobacco industry’s agenda.⁵ Fine particulate matter and ozone are both principally generated by the burning of fossil fuels. By suggesting that the “sound science” initiative be launched around PM 2.5 and

¹ “Strengthening Transparency in Regulatory Science,” 83 FR 18768, 18768, <https://www.federalregister.gov/documents/2018/04/30/2018-09078/strengthening-transparency-in-regulatory-science>

² December 23, 1996 memorandum from Christopher Horner to R.J. Reynolds, pgs. 1 – 2, <https://www.documentcloud.org/documents/3445520-Horner-to-R.J.R-Reynolds-1996-Bracewell-Giuliani.html#document/p1>

³ *Id.* at 4.

⁴ *Id.* at 5.

⁵ *Id.* at 3.

ozone rulemakings, Horner accomplished two goals: hiding the hand of the tobacco industry and helping broaden the coalition of industries supporting the initiative.

In fact, the fossil fuel and electric utility industries were quite concerned about the potential for new regulations limiting PM 2.5 and ozone. Citizens for a Sound Economy (CSE), a front group founded by Charles and David Koch of Koch Industries, opposed new PM 2.5 regulations.⁶ CSE was led by C. Boyden Gray, an heir to the R.J. Reynolds tobacco fortune.⁷ Gray also ran another front group, the Air Quality Standards Coalition, which was created by the National Association of Manufacturers (NAM)⁸ to fight EPA air pollution regulations.⁹

The fossil fuel industry strongly supported the tobacco industry's so-called "sound science" initiative. By January 1997, CSE organized a protest at a Senate hearing on proposed EPA air pollution regulations. The protestors, dressed in white lab coats, held signs saying "Harvard, release the data!" in reference to a Harvard study demonstrating a link between PM 2.5 pollution and increased mortality.¹⁰ An October 1997 memo obtained from Philip Morris lists the American Petroleum Institute (API), the Electric Power Research Institute, and the Statistical Assessment Service, a climate denier front group funded by fossil fuel dynasties such as the Kochs and the Scaifes,^{11,12} as three of the five organizations supporting the "sound science" initiative.¹³

⁶ Brad Johnson, Republicans Wage Anti-'Secret Science' Campaign Against The EPA, *HuffPost* (June 25, 2014), https://www.huffingtonpost.com/2014/06/25/secret-science-epa_n_5529521.html

⁷ *Id.*

⁸ NAM counts many energy companies among its members. Current members include, among others, American Electric Power, Andeavor, Arch Coal, BP America, ConocoPhillips, Continental Resources, Devon Energy, DTE Energy, EnCana, Exxon Mobil, Koch Companies, Marathon Petroleum, Phillips 66, Shell Downstream, and Southern Company. See, "NAM Affiliated Organizations," National Association of Manufacturers, <http://documents.nam.org/LAW/Q4-2017.pdf> (viewed on June 21, 2018).

⁹ Brad Johnson, Republicans Wage Anti-'Secret Science' Campaign Against The EPA, *HuffPost* (June 25, 2014), https://www.huffingtonpost.com/2014/06/25/secret-science-epa_n_5529521.html

¹⁰ *Id.*

¹¹ Statistical Assessment Service, DeSmogBlog, <https://www.desmogblog.com/statistical-assessment-service> (viewed on June 21, 2018)

¹² The Scaife Foundations were established with money from the Mellon industrial, oil, aluminum, and banking fortunes, and have historically been used to fund a variety of groups close to the fossil fuel industry. See, Scaife Foundations, SourceWatch, https://www.sourcewatch.org/index.php/Scaife_Foundations (viewed on July 30, 2018).

¹³ "Questions for Data Disclosure," Oct. 6, 1997, <https://www.industrydocumentslibrary.ucsf.edu/tobacco/docs/#id=nlyc0069>. The other two groups listed as supporting the initiative are the National Rifle Association and the American Iron and Steel Institute.

In 1998, the initiative was rebranded “secret science” by Powell Tate, a lobbying firm working for the tobacco industry.¹⁴ “Secret science” is of course the very phrase Pruitt used when announcing the proposed rule, writing “[t]he era of secret science at EPA is coming to an end.”¹⁵ Powell Tate recommended identifying a “catalyst organization” to push the initiative, and suggested NAM and the Business Roundtable as two possibilities.¹⁶ Both NAM and the Business Roundtable count many fossil fuel companies among their members.¹⁷

During the 1990s, Philip Morris also created a front group to support its campaign to make it more difficult for regulatory agencies to use scientific studies in rulemaking: The Advancement of Sound Science Coalition (TASSC).¹⁸ While a creation of big tobacco, TASSC’s donors also included the oil companies Amoco, Chevron, ExxonMobil, and Occidental Petroleum.¹⁹ As such, TASSC devoted significant efforts to challenging climate science. Its executive director, Steve Milloy, helped shape the “Global Climate Science Communications Plan,” an API project to develop a strategy to confuse and mislead the public about climate change.²⁰

¹⁴ “Secret Science Action Plan,” Powell Tate (April 9, 1998), <https://www.industrydocumentslibrary.ucsf.edu/tobacco/docs/#id=ftcy0177> (viewed on June 21, 2018)

¹⁵ See, “EPA Administrator Pruitt Proposes Rule To Strengthen Science Used In EPA Regulations,” U.S. Environmental Protection Agency (April 24, 2018), <https://www.epa.gov/newsreleases/epa-administrator-pruitt-proposes-rule-strengthen-science-used-epa-regulations>. See also, Tweet of @EPAScottPruitt (April 24, 2018 at 3:56 p.m.), https://twitter.com/EPAScottPruitt/status/988869278727393280?ref_src=twsrc%5Etfw&ref_url=https%3A%2F%2Fwww.desmogblog.com%2F2018%2F05%2F05%2Fscott-pruitt-epa-secret-science-plan-defend-tobacco-clean-air-rules

¹⁶ “Secret Science Action Plan,” pg. 7, Powell Tate (April 9, 1998), <https://www.industrydocumentslibrary.ucsf.edu/tobacco/docs/#id=ftcy0177> (viewed on June 21, 2018)

¹⁷ The Business Roundtable’s current membership includes many energy companies and utilities, including, among others, American Electric Power, Anadarko Petroleum, BP, Chevron, ConocoPhillips, Duke Energy, Edison International, Exxon Mobil, Marathon Oil, Marathon Petroleum, NextEra Energy, Noble Energy, NRG Energy, Phillips 66, Sempra Energy, Shell, Southern Company, TransCanada, and World Fuel Services Corporation. See, Members, The Business Roundtable, <https://www.businessroundtable.org/about/members> (viewed on June 21, 2018)

¹⁸ The Advancement of Sound Science Coalition, DeSmog Blog, <https://www.desmogblog.com/advancement-sound-science-coalition> (viewed on June 22, 2018)

¹⁹ *Id.*

²⁰ Global Climate Science Communications Plan (1998), SourceWatch, [https://www.sourcewatch.org/index.php/Global_Climate_Science_Communications_Plan_\(1998\)](https://www.sourcewatch.org/index.php/Global_Climate_Science_Communications_Plan_(1998)), (viewed on June 21, 2018)

Milloy, along with Horner and a small number of lawyers and lobbyists closely tied to the tobacco and/or fossil fuel industries,²¹ drove the industries' two-decade-long push to erect "procedural hurdles" to the use of science in rulemaking under the guise of defending "sound science" and defeating "secret science." Indeed, after Pruitt announced the proposed rule at an event to which Milloy was invited, Milloy declared that he'd been working on furthering the "secret science" initiative "for twenty years."²²

Milloy remained on Philip Morris' retainer through at least 2005.²³ From 2004 through 2009, he was a manager of the Free Enterprise Action Fund (FEAF),²⁴ a mutual fund established to oppose shareholder resolutions focused on climate change and other matters related to corporate social and environmental responsibility.²⁵ FEAF has received support from the Cato Institute, which itself has received at least \$15 million in funding from groups tied to Charles and David Koch and Koch Industries,²⁶ ExxonMobil,²⁷ and the Heritage Foundation, which itself received \$4.8 million from Koch-related groups.²⁸

Milloy has also worked at the National Environmental Policy Institute (NEPI),²⁹ a group funded by ExxonMobil and Shell that promotes abolishing environmental regulations.³⁰ From 2013 to 2016, Milloy worked as director of external policy and strategy for Murray Energy, the nation's largest privately owned coal company.³¹ He is currently a senior policy fellow

²¹ Sharon Lerner, "Republicans Are Using Big Tobacco's Secret Science Playbook to Gut Health Rules," *The Intercept* (Feb. 5, 2017), <https://theintercept.com/2017/02/05/republicans-want-to-make-the-epa-great-again-by-gutting-health-regulations/>

²² Carolyn Kormann, "Scott Pruitt's Crusade Against 'Secret Science' Could Be Disastrous For Public Health," *The New Yorker* (April 26, 2018), <https://www.newyorker.com/science/elements/scott-pruitts-crusade-against-secret-science-could-be-disastrous-for-public-health>

²³ Steve Milloy, DeSmog Blog, <https://www.desmogblog.com/steve-milloy> (viewed on June 25, 2018)

²⁴ *Id.*

²⁵ *Id.*

²⁶ Cato Institute, SourceWatch, https://www.sourcewatch.org/index.php/Cato_Institute#Finances_and_Funding (viewed on June 25, 2018)

²⁷ Cato Institute, SourceWatch, https://www.sourcewatch.org/index.php/Cato_Institute#Finances_and_Funding (viewed on June 25, 2018)

²⁸ Heritage Foundation, SourceWatch, https://www.sourcewatch.org/index.php/Heritage_Foundation (viewed on June 25, 2018)

²⁹ Steve Milloy, DeSmog Blog, <https://www.desmogblog.com/steve-milloy> (viewed on June 25, 2018)

³⁰ Factsheet: National Environmental Policy Institute (NEPI), ExxonSecrets.org, <https://exxonsecrets.org/html/orgfactsheet.php?id=56> (viewed on June 25, 2018)

³¹ Carolyn Kormann, "Scott Pruitt's Crusade Against 'Secret Science' Could Be Disastrous For Public Health," *The New Yorker* (April 26, 2018), <https://www.newyorker.com/science/elements/scott-pruitts-crusade-against-secret-science-could-be-disastrous-for-public-health>

with Energy & Environment Legal,³² a member of the State Policy Network.³³ The State Policy Network has ties to the coal industry, opposes wind energy, has harassed climate scientists, and is funded by fossil fuel interests.³⁴

Following Donald Trump's election, Milloy joined the EPA transition team, as did Horner.³⁵ Milloy celebrated EPA's proposed rule limiting science in rulemaking on Twitter, noting that he was "inside the administrator's office:"



 **Steve Milloy** ✓
@JunkScience

From yesterday's science transparency event at EPA

Climate skeptic barbarians @JunkScience and @ClimateDepot

Not just at the EPA's gate, but inside the administrator's office eating the greens' lunch.

12:41 PM - Apr 25, 2018

♥ 38 💬 33 people are talking about this

Another key player in the push to limit science in rulemaking is Texas Congressman Lamar Smith. Smith has been the chairman of the House Committee on Science, Space, and Technology since 2013. The oil and gas industry is Smith's largest source of campaign

³² Fellows & Advisors, E&E Legal, <https://eelegal.org/fellows-advisors-2/> (viewed on June 25, 2018)

³³ The State Policy Network is a network of front groups funded by corporations and wealthy individuals including the Koch brothers and tobacco companies. *See*, State Policy Network, SourceWatch, https://www.sourcewatch.org/index.php/State_Policy_Network (viewed on June 25, 2018)

³⁴ Energy & Environment Legal Institute, SourceWatch, https://www.sourcewatch.org/index.php/Energy_%26_Environment_Legal_Institute (viewed on June 25, 2018)

³⁵ Graham Readfearn, "Scott Pruitt's Secret Science Plan Was Developed to Defend Tobacco and It Could Be Coming for Clean Air Rules," DeSmog Blog (May 5, 2018), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5716244/>

donations, contributing nearly \$800,000,³⁶ and Smith has drawn most of his committee staff from the fossil fuel industry.³⁷

In his role as chairman of the House Science Committee, Smith has embraced the “secret science” initiative championed by Milloy, Horner, and the network of tobacco and fossil fuel industry-funded front groups that employ them. In a 2013 op-ed in the *Wall Street Journal*, Smith attacked EPA for not releasing the data underlying two important peer-reviewed studies³⁸ that demonstrated the increased mortality associated with exposure to fine particulate matter.³⁹ Following several letters to EPA demanding the underlying data for these studies, Smith issued a subpoena to EPA, notwithstanding the fact that Harvard University and the American Cancer Society, not EPA, possessed the confidential public health data at issue.⁴⁰

Realizing he could not force EPA to turn over documents it did not possess, Smith introduced legislation to prohibit EPA from considering scientific studies whose underlying data were not public. In 2015 he introduced the Secret Science Reform Act,⁴¹ a bill supported by ExxonMobil, Integrys Energy Group, CMS Energy, Duke Energy, the Edison Electric Institute, the U.S. Chamber of Commerce,⁴² Peabody Energy, and NAM.⁴³ In 2017, Smith introduced the Honest and Open New EPA Science Treatment Act of 2017 (HONEST Act), which, like the Secret Science Reform Act before it, would prohibit EPA from considering scientific studies whose underlying data are not public.⁴⁴ Once again, energy interests,

³⁶ Rep. Lamar Smith Top Industries, Center for Responsive Politics, <https://www.opensecrets.org/members-of-congress/industries?cid=N00001811&cycle=CAREER> (viewed on June 25, 2018).

³⁷ Brad Johnson, “How One GOP-Controlled Committee Is Waging A War On Science,” *HuffPost* (June 24, 2014), https://www.huffingtonpost.com/2014/06/24/house-science-committee_n_5525609.html

³⁸ These studies are the Harvard Six Cities study and the Cancer Prevention Study II, sponsored by the American Cancer Society.

³⁹ Lamar Smith, “The EPA’s Game of Secret Science,” *The Wall Street Journal* (July 29, 2013), <https://www.wsj.com/articles/SB10001424127887323829104578624562008231682>

⁴⁰ Brad Johnson, Republicans Wage Anti-‘Secret Science’ Campaign Against The EPA, *HuffPost* (June 25, 2014), https://www.huffingtonpost.com/2014/06/25/secret-science-epa_n_5529521.html

⁴¹ H.R.4012 (113th Congress), <https://www.congress.gov/bill/113th-congress/house-bill/4012/text>

⁴² The U.S. Chamber of Commerce, while it does not disclose its membership, is known to support the fossil fuel industry. See, Alex Walker, “The Chamber’s Smokescreen: The Truth Behind the Chamber’s ‘All of the Above’ Energy Policy,” Public Citizen (June 19, 2017), https://www.citizen.org/system/files/case_documents/institute_for_21st_century_energy_report_final.pdf

⁴³ Clients lobbying on H.R.4012: Secret Science Reform Act of 2014, Center for Responsive Politics, <https://www.opensecrets.org/lobby/billsum.php?id=hr4012-113> (viewed on June 26, 2018)

⁴⁴ H.R.1430 (115th Congress), <https://www.congress.gov/bill/115th-congress/house-bill/1430/text> (viewed on June 25, 2018)

including ExxonMobil, the U.S. Chamber of Commerce, and NAM all lobbied in support of the bill.⁴⁵

In early 2018, having been unsuccessful at moving his HONEST Act through Congress, Smith took his case directly to Administrator Pruitt. On January 16, Pruitt met with Smith to discuss implementing the HONEST Act at EPA.⁴⁶ Just a few days prior to Pruitt's meeting with Smith, internal EPA emails reveal that political appointees indicated that they had identified "a path forward" on the "secret science" initiative.⁴⁷ These emails were sent between Brittany Bolen, EPA Senior Deputy Associate Administrator for Policy and former counsel for Senator Jim Inhofe,⁴⁸ Richard Yamada, EPA Research and Technology Policy Advisor and former aide to Congressman Lamar Smith,⁴⁹ Erik Baptist, EPA Senior Deputy General Counsel and former senior counsel for API,⁵⁰ and Ryan Jackson, EPA Chief of Staff and former chief of staff for Senator Inhofe.⁵¹

Following Pruitt's meeting with Smith, internal EPA emails show that political staff continued to work on the "secret science" initiative. On January 31, Nancy Beck, EPA Deputy Assistant Administrator for the Office of Chemical Safety and Pollution Prevention and a former senior director of regulatory science policy at the American Chemistry Council,⁵² raised concerns that requiring underlying data be publicly available would create a problem for the chemical industry. This industry considers chemical testing data to be confidential business information (CBI).⁵³ Yamada assured Beck that he would address her

⁴⁵ Clients lobbying on H.R.1430: HONEST Act, Center for Responsive Politics, <https://www.opensecrets.org/lobby/billsum.php?id=hr1430-115> (viewed on June 26, 2018)

⁴⁶ Scott Waldman and Niina Heikkinnen, "Smith pitched Pruitt on 'secret science.' Now it's happening," *E&E News* (April 20, 2018), <https://www.eenews.net/stories/1060079655>

⁴⁷ January 11, 2018 10:01 AM email from Brittany Bolen to Ryan Jackson, Richard Yamada, and Erik Baptist, <https://www.expressnews.com/news/local/article/Lamar-Smith-EPA-10924598.php> (viewed on June 25, 2018)

⁴⁸ Brittany Bolen, *ProPublica*, <https://projects.propublica.org/trump-town/staffers/brittany-bolen> (viewed on June 25, 2018)

⁴⁹ Richard Yamada, LinkedIn, <https://www.linkedin.com/in/richard-yamada-8945522/> (viewed on June 25, 2018)

⁵⁰ Catherine Douglas Moran, "Petroleum Institute Picked for EPA Legal Counsel," *Bloomberg BNA* (July 5, 2017), <https://www.bna.com/petroleum-institute-lawyer-n73014461210/>

⁵¹ EPA's Chief of Staff, U.S. Environmental Protection Agency, <https://www.epa.gov/aboutepa/epas-chief-staff> (viewed on June 25, 2018)

⁵² Nancy Beck, LinkedIn, <https://www.linkedin.com/in/nancybbeck/> (viewed on June 26, 2018)

⁵³ January 31, 2018 2:51 PM email from Nancy Beck to Richard Yamada, Erik Baptist, and Justin Schwab, <https://www.expressnews.com/news/local/article/Lamar-Smith-EPA-10924598.php> (viewed on June 26, 2018)

concerns, responding he “didn’t know about the intricacies of CBI – ok, we will need to thread this one real tight!”⁵⁴

Although it would be blantly biased to treat industry studies differently than ones conducted by independent academic researchers, EPA found a way to “thread this one.” The proposed rule allows the Administrator to waive the data availability requirement for any study if it is not feasible to make the underlying data publicly available “in a manner sufficient for independent validation, in a fashion that is consistent with law, protects privacy, confidentiality, *confidential business information*, and is sensitive to national and homeland security.”⁵⁵ (Emphasis added.)

B. EPA Is Captured by the Industry That Wants This Rule.

1. Former Administrator Pruitt Has Long and Deep Political and Financial Ties to the Fossil Fuel and Tobacco Industries

Scott Pruitt may be gone, but this proposed rule was developed on his watch as Administrator, and his conflicts of interest therefore remain highly relevant to the defects of this proposed rule. Pruitt’s EPA kept an open door for proponents of the “secret science” initiative, as his political career was in large part underwritten by the fossil fuel industry. In his four campaigns for elected office in 2002, 2006, 2010, and 2014, Pruitt collected more than \$350,000 from corporations and individuals in the energy and natural resources sector, 13 percent of the total campaign contributions he received and 15 percent of campaign contributions that can be tied to a particular industrial or other sector.⁵⁶ In comparison, campaign contributions made by the energy and natural resources industry averaged just three percent of total contributions made to state attorney general candidates across the country since 2000.⁵⁷

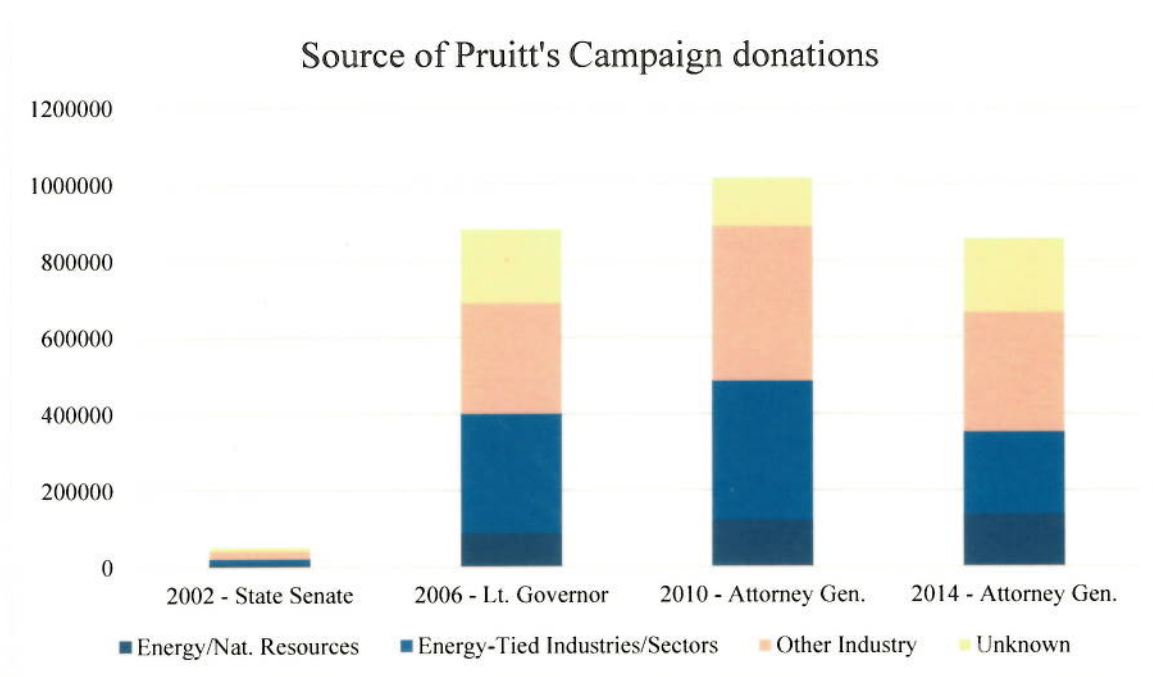
⁵⁴ January 31, 2018 7:54 PM email from Richard Yamada to Nancy Beck, Erik Baptist, and Justin Schwab, <https://www.expressnews.com/news/local/article/Lamar-Smith-EPA-10924598.php> (viewed on June 27, 2018)

⁵⁵ “Strengthening Transparency in Regulatory Science,” 83 FR 18768, 18774, <https://www.federalregister.gov/documents/2018/04/30/2018-09078/strengthening-transparency-in-regulatory-science>

⁵⁶ Follow the Money, <https://www.followthemoney.org/entity-details?eid=6583668> (viewed on July 2, 2018). Note that the total Pruitt’s campaign received is actually \$2,813,197 because a total of \$229,984 listed as donated to his 2014 re-election campaign of OK AG was carried forward from previous campaigns.

⁵⁷ Calder Burgam, “Energy Interests Power Pruitt,” Follow the Money (Jan. 17, 2017), <https://www.followthemoney.org/research/blog/energy-interests-power-pruitt/>

In addition to contributions directly from the energy industry, Pruitt also received considerable financial support from industries linked to the energy industry: “legal services and lobbying” firms that advocate for the energy industry and “general business” and “construction” entities that service the energy sector. Pruitt’s campaigns also received donations from political action committees (PACs) and issue advocacy groups that were at least partially funded by the energy industry.⁵⁸



In total, the energy sector and associated industries and groups gave more than \$1,250,000 to Pruitt’s campaigns, 44 percent of the total contributions received and 55 percent of donations that were tied to a particular industrial or sector.

Tellingly, these energy sector contributions to Pruitt’s 2014 re-election campaign increased 13 percent over 2010 contributions, despite the fact that in 2014, Pruitt ran unopposed in both the primary and general elections. Contributions from almost every other sector fell in 2014, as might normally be expected when a candidate is running unopposed.

Fossil fuel industry support for Pruitt went beyond direct contributions to his campaigns.⁵⁹ In Pruitt’s 2010 campaign for attorney general, the outside group Republican State Leadership

⁵⁸ Follow the Money, <https://www.followthemoney.org/entity-details?eid=6583668> (viewed on July 2, 2018)

⁵⁹ Prior to 2015, Oklahoma limited contributions to candidates for state office to \$5,000. See, State Limits on Contributions to Candidates, National Conference of State Legislatures, http://www.ncsl.org/Portals/1/documents/legismgt/Limits_to_Candidates_2012-2014.pdf. This limit

Committee (RSLC) spent \$150,000 on his behalf.⁶⁰ The U.S. Chamber of Commerce, a major, longtime lobbyist for the energy industry,⁶¹ was RSLC's largest donor, contributing almost \$4 million to the group. Devon Energy, also a top donor, contributed \$350,000 in 2010.⁶²

Pruitt wasn't only on the receiving end of spending by outside groups. He and his supporters created PACs to expand his influence and provide other avenues for him to direct fossil fuel and industry money to like-minded politicians. Run by Pruitt, the Oklahoma Strong Leadership PAC raised roughly \$400,000 during 2016 election cycle, almost 20 percent of which came from energy interests.⁶³ Liberty 2.0, a super PAC created by Pruitt's supporters,⁶⁴ raised approximately \$450,000 during the 2016 election cycle, over a third of which came from energy interests.⁶⁵ Of its nine largest donors, four are in the energy industry including the second largest donor, Murray Energy, which gave \$50,000.⁶⁶

During this period, Pruitt also served as chairman and sat on the executive committee of the Republican Attorney Generals Association (RAGA). Under Pruitt's leadership, RAGA raised an enormous amount of money for its section 527 political action committee from the U.S. Chamber of Commerce and the energy industry. During the 2014 and 2016 election cycles, the Chamber was by far its largest donor, giving the organization more than \$4 million.

During this period, the largest donors to RAGA's super PAC included Koch Industries (almost \$500,000), the American Coalition for Clean Coal Electricity (more than \$300,000),

drove larger contributions to outside spending groups organized under section 527 and 501(c)(4) of the Internal Revenue Code.

⁶⁰ Paul Monies, "Outside groups make ad push in final days of campaigns," *The Oklahoman* (Oct. 31, 2010), <http://newsok.com/article/3509737>

⁶¹ Alyssa Katz, "The Influence Machine: The U.S. Chamber of Commerce and the Corporate Capture of American Life," pgs. 111 – 127, Spiegel & Grau (2015)

⁶² Republican State Leadership Cmte Contributors, Center for Responsive Politics, https://www.opensecrets.org/527s/527cmtdetail_contribs.php?ein=050532524&cycle=2010 (viewed on July 2, 2018)

⁶³ Oklahoma Strong Leadership PAC, Center for Responsive Politics, <https://www.opensecrets.org/pacs/lookup2.php?strID=C00572198&cycle=2016> (viewed on July 2, 2018)

⁶⁴ Alex Guillén, "Energy executives, secret nonprofit raise money to back Pruitt," *Politico* (Jan. 6, 2017) <https://www.politico.com/story/2017/01/scott-pruitt-epa-nonprofit-backers-233306>

⁶⁵ Liberty 2.0, Center for Responsive Politics, <https://www.opensecrets.org/pacs/lookup2.php?cycle=2016&strID=C00572917> (viewed on July 2, 2018)

⁶⁶ Liberty 2.0 Contributors, Center for Responsive Politics, <https://www.opensecrets.org/pacs/pacgave2.php?cycle=2016&cmte=C00572917> (viewed on July 2, 2018)

Murray Energy (\$250,000), the American Fuel and Petrochemical Manufacturers (almost \$200,000), and Devon Energy (\$125,000).⁶⁷

Pruitt maintained his deep ties to the energy industry when he left Oklahoma to run the EPA. During his nomination process, the America Rising super PAC, which has received large donations from fossil fuel interests,⁶⁸ funded a campaign in support of his confirmation.⁶⁹ This campaign included ads targeting Democratic senators and a ConfirmPruitt.com website.⁷⁰

The tobacco industry has also played a significant role in bankrolling Pruitt's political career. Tobacco companies, including Reynolds American (parent company of R.J. Reynolds) and Philip Morris, originators of the "secret science" initiative, and Altria, as well as tobacco-related interests contributed almost \$20,000 to Pruitt's political campaigns.⁷¹ It was also one of the major sources of funds for outside spending groups connected to Pruitt. In 2010, the year the RSLC spent \$150,000 on his behalf, tobacco companies Altria and Reynolds American were the group's third and fourth largest contributors, giving \$1.4 million and \$1.3 million, respectively.⁷² Altria and Reynolds American were also top ten donors to RAGA while Pruitt was part of its leadership, giving \$570,000 and \$540,000, respectively.⁷³

2. Former Administrator Pruitt Has a Long History of Helping the Fossil Fuel Industry.

⁶⁷ Republican Attorneys General Assn Contributors, Center for Responsive Politics, https://www.opensecrets.org/527s/527cmtedetail_contribs.php?cycle=2014&ein=464501717 (viewed on July 2, 2018)

⁶⁸ America Rising PAC Contributors, Center for Responsive Politics, <https://www.opensecrets.org/pacs/pacgave2.php?cmte=C00542902&cycle=2014> (viewed on July 2, 2018)

⁶⁹ Eliana Johnson, "Conservatives target red-state Democrats to speed Trump's nominations," *Politico* (Dec. 21, 2016), <https://www.politico.com/story/2016/12/trump-nominations-red-state-democrats-232890>

⁷⁰ An archived version of this website is available at <http://web.archive.org/web/20170217193132/http://confirmpruitt.com/>

⁷¹ Follow the Money, <https://www.followthemoney.org/show-me?dt=1&c-t-eid=6583668&d-cci=143#f1|gro=d-eid> (viewed on July 2, 2018)

⁷² Republican State Leadership Committee Contributors, Center for Responsive Politics, https://www.opensecrets.org/527s/527cmtedetail_contribs.php?cycle=2010&ein=050532524 (viewed on July 2, 2018)

⁷³ Republican Attorneys General Assn Contributors, Center for Responsive Politics, https://www.opensecrets.org/527s/527cmtedetail_contribs.php?cycle=2014&ein=464501717 (viewed on July 2, 2018)

Bankrolled by the energy industry, Pruitt repeatedly used his official position as Oklahoma Attorney General to execute the agenda of his political patrons in the fossil fuel industry. The proposed rule is just the latest iteration of this pattern.

Pulitzer Prize-winning reporting by the *New York Times* uncovered that as Oklahoma Attorney General, Pruitt used official letterhead to press the case of Devon Energy, one of his biggest donors, before EPA. Devon claimed EPA was overestimating the amount of air pollution caused by natural gas drilling. The company's lawyers drafted a letter on this subject, sent it to Pruitt's office, which then cut and pasted it onto official state government stationary with only a few word changes, and sent it to Washington over Pruitt's signature.⁷⁴

Documents uncovered from public records requests to the Oklahoma Attorney General's Office also showed how Pruitt worked on behalf of the American Fuel and Petrochemical Manufacturers, a major donor to RAGA during the time Pruitt held a leadership role in the group.⁷⁵ That group gave Pruitt template language for a petition and urged him to sue the federal government over the EPA Renewable Fuel Standard (RFS). The trade association noted that "this argument is more credible coming from a state."⁷⁶ Pruitt followed the group's suggestion and sued.⁷⁷

Indeed, as Attorney General of Oklahoma, Scott Pruitt made a habit of suing EPA in order to challenge rules that industry, especially the fossil fuel industry, wanted to see weakened or removed. Pruitt sued the EPA 14 times.⁷⁸ The target of four of these lawsuits was the Obama administration's Clean Power Plan (CPP). Pruitt was one of the key strategists involved in

⁷⁴ Eric Lipton, "Energy Firms in Secretive Alliance with Attorneys General," *The New York Times* (Dec. 6, 2014), <https://www.nytimes.com/2014/12/07/us/politics/energy-firms-in-secretive-alliance-with-attorneys-general.html>

⁷⁵ The American Fuel and Petrochemical Manufacturers contributed almost \$250,000 to RAGA while Pruitt served on its executive committee from 2014 to 2016. Data from 2012 and 2013, when Pruitt was RAGA's chairman is unavailable. *See*, Republican Attorneys General Association, Center for Responsive Politics, https://www.opensecrets.org/527s/527cmtedetail_donors.php?url=527cmtedetail_donors.php%3Fcycle%3D2014%26ein%3D464501717&cname=american+fuel+and+petrochemical+manufacturers&ein=464501717&cycle=2014 (viewed on July 9, 2018).

⁷⁶ Oklahoma AG Releases 7,564 Pages in Response to CMD Request, Center for Media and Democracy (Feb. 22, 2017), <https://www.exposedbycmd.org/Scott-Pruitt-Missing-Emails>

⁷⁷ *Id.*

⁷⁸ "Pruitt v. EPA: 14 Challenges of EPA Rules by the Oklahoma Attorney General," *The New York Times* (Jan. 14, 2017), <https://www.nytimes.com/interactive/2017/01/14/us/politics/document-Pruitt-v-EPA-a-Compilation-of-Oklahoma-14.html>

planning the attack on this EPA rule.⁷⁹ Multiple companies and trade associations filed petitions against the CPP. Six of them donated to Pruitt and/or to outside spending groups involved with him: the American Coalition for Clean Coal Electricity (at least \$329,650), the American Fuel and Petrochemical Manufacturers (at least \$246,720), Murray Energy (at least \$300,000), Peabody Energy (at least \$13,750), Southern Company (at least \$205,250), and the U.S. Chamber of Commerce (at least \$6,658,546).

Pruitt also sued EPA to overturn air pollution rules that the fossil fuel industry didn't like, including regulations limiting mercury, air toxics, and regional haze.⁸⁰ Numerous energy interests that contributed to Pruitt's campaign and/or outside spending groups associated with him also sued to block these rules. Murray Energy (contributed at least \$300,000 to Pruitt or to groups associated with him), the National Mining Association, the coal industry's trade association (at least \$85,375), Peabody Energy (at least \$13,750), and Southern Company (at least \$205,250) all sued to block the mercury and air toxic rules.⁸¹ Oklahoma Gas and Electric (at least \$9,250) sued to block the regional haze rule; its CEO organized a fundraiser for Pruitt just four days after Pruitt appealed an adverse ruling in this case.⁸²

Pruitt also challenged the implementation of a rule limiting air pollution that crosses state lines. In that case, co-litigants included Murray Energy (contributed at least \$300,000 to Pruitt or to groups associated with him), the National Mining Association (at least \$85,375), Peabody Energy (at least \$13,750), and Southern Company (at least \$205,250).

Pruitt's suit opposing EPA's update to national ambient air quality standards also saw him take the side of many deep-pocketed fossil fuel industry donors. Co-litigants included the American Fuel and Petrochemical Manufacturers (at least \$246,720), API (at least \$150,000), Murray Energy (at least \$300,000), and the U.S. Chamber of Commerce (at least \$6,658,546).

Pruitt sued EPA to block a rule limiting carbon emissions from new power plants. The American Coalition for Clean Coal Energy (at least \$329,650), Murray Energy (at least \$300,000), Peabody Energy (at least \$13,750), and Southern Company (at least \$205,250) were all co-litigants in this suit.⁸³

⁷⁹ Coral Davenport and Julie Hirschfeld Davis, "Move to Fight Obama's Climate Plan Started Early," *The New York Times* (Aug. 3, 2015), https://www.nytimes.com/2015/08/04/us/obama-unveils-plan-to-sharply-limit-greenhouse-gas-emissions.html?_r=0

⁸⁰ Scott Pruitt's web of fundraising and lawsuits, Environmental Defense Fund, <http://www.edfaction.org/scott-pruitts-web-fundraising-and-lawsuits> (viewed on July 2, 2018)

⁸¹ *Id.*

⁸² *Id.*

⁸³ *Id.*

Pruitt's symbiotic relationship with the fossil fuel industry and its allies did not end once he became EPA Administrator. In just his first several weeks on the job, Pruitt met with more than 40 energy interests. During this same period, Pruitt met with almost no environmental groups.⁸⁴

The relationships Pruitt established through his political activities as Oklahoma Attorney General continued to pay off for his donors once he became EPA Administrator. Within weeks of Pruitt's assuming control of EPA, the agency withdrew its request that oil and gas companies provide it with detailed information regarding methane emissions at facilities they operate.⁸⁵ A few weeks after that, EPA announced that it was postponing the implementation of a rule that would have required oil and gas companies to retrofit equipment in order to prevent leaks of methane and other dangerous gases.⁸⁶ It is estimated that these decisions saved oil and gas companies millions of dollars. Many of these companies donated directly and indirectly to Pruitt.⁸⁷ Their funding of him was well rewarded.

These decisions – and others – were specifically requested by the fossil fuel industry. Six days after Pruitt was sworn in as EPA Administrator, Chevron wrote to Pruitt with a list of

⁸⁴ "Who is E.P.A. Administrator Scott Pruitt Meeting With? A Detailed Schedule," *The New York Times* (Oct. 3, 2017), <https://www.nytimes.com/interactive/2017/10/03/us/politics/document-Pruitt-Sked-and-McCarthy-Sked.html>. These included: the National Association of Manufacturers, Duke Energy, the Edison Electric Institute (a trade group representing utilities), the National Rural Electric Cooperative Association, BP, Chevron, the American Petroleum Institute (a trade group representing oil & gas companies), the National Stripper Well Association (a trade group representing small oil and gas companies), the Oklahoma Independent Petroleum Association, the Domestic Energy Producers Alliance (a trade group representing oil & gas companies), the American Gas Association, FirstEnergy, Consol Energy, Associated Electric Cooperative, the National Association of Royalties Owners, the National Mining Association, Big Rivers Electric Corporation, Kansas Electric Power Cooperative, South Texas Electric Cooperative, Central Missouri Electric Cooperative, Hoosier Energy Rural Electric Cooperative, Seminole Electric Cooperative, Deseret Power Electric Cooperative, Arizona G&T Cooperatives, Central Electric Power Cooperative, Georgia Transmission Corporation, Sho-Me Power Electric Cooperative, N.W. Electric Power Cooperative, Kentucky Association of Electric Cooperatives, North Dakota Association of Rural Electric Cooperatives, Minnkota Power Cooperative, North Central Electric Cooperative, Central Power Electric Cooperative, Basin Electric Cooperative, the Southern Company, Alliance Resource Partners, ExxonMobil, American Fuel & Petrochemical Manufacturers, the Portland Cement Association, Royal Dutch Shell, and Contura Energy.

⁸⁵ Hiroko Tabuchi and Eric Lipton, "How Rollbacks at Scott Pruitt's E.P.A. are a Boon to Oil and Gas," *The New York Times* (May 20, 2017), https://www.nytimes.com/2017/05/20/business/energy-environment/devon-energy.html?_r=0

⁸⁶ *Id.*

⁸⁷ *Id.*

policy recommendations.⁸⁸ Among Chevron’s requests was that EPA back off regulating methane emissions.⁸⁹ Chevron also urged Pruitt to “repeal or reform the RFS,”⁹⁰ “withhold implementing more stringent NAAQS [national ambient air quality standards] for [o]zone,”⁹¹ and “[r]eform ‘sue and settle’ practices.”⁹² EPA proceeded to undermine the RFS by taking several actions. It gave an unprecedented number of waivers to small refineries and did not require that large refiners make up the difference.⁹³ The agency issued new standards for reviewing ozone NAAQS to place greater weight on the potential economic costs of the energy industry.⁹⁴ EPA also ended what Chevron referred to as “sue and settle” with a directive that would require the agency to involve regulated industries such as the fossil fuel industry in any settlement or consent decree that might affect them.⁹⁵

Reprising Horner and the tobacco industry’s original “sound science” language, Chevron’s letter also states “[a]n effective regulatory framework requires [...] sound scientific basis” and goes on to say that “[r]egulations should be based on transparent, verifiable, and well-vetted (i.e., broadly peer reviewed) data.”⁹⁶ Chevron’s letter not only requests the proposed rule, but it uses the same transparency framing EPA ultimately chose for its proposal.

EPA’s efforts to advance the interests of the fossil fuel industry weren’t just limited to policy decisions. Despite the fact that the agency’s mission is to “protect human health and the environment,”⁹⁷ Pruitt travelled to Morocco to promote the U.S. liquefied natural gas industry (LNG).⁹⁸ One of Pruitt’s largest financial patrons, Oklahoma-based natural gas producer

⁸⁸ See, Appendix I, February 23, 2017 letter from Chevron Chairman and CEO John S. Watson to Edward Scott Pruitt.

⁸⁹ *Id.* at 5

⁹⁰ *Id.*

⁹¹ *Id.*

⁹² *Id.* at 4

⁹³ Jarrett Renshaw, “EPA won’t force refiners to make up waived biofuels volumes,” *Reuters* (June 15, 2018), <https://www.reuters.com/article/us-usa-biofuels-epa/epa-wont-force-refiners-to-make-up-waived-biofuels-volumes-idUSKBN1JB27Y>

⁹⁴ E. Scott Pruitt, “Back-to-Basics Process for Reviewing National Ambient Air Quality Standards,” pg. 4, U.S. Environmental Protection Agency (May 9, 2018), <https://www.epa.gov/sites/production/files/2018-05/documents/image2018-05-09-173219.pdf>

⁹⁵ Administrator Pruitt Issues Directive to End EPA “Sue and Settle,” U.S. Environmental Protection Agency (Oct. 16, 2017), <https://www.epa.gov/newsreleases/administrator-pruitt-issues-directive-end-epa-sue-settle>

⁹⁶ See, Appendix I, February 23, 2017 letter from Chevron Chairman and CEO John S. Watson to Edward Scott Pruitt, pg. 4.

⁹⁷ Our Mission and What We Do, U.S. Environmental Protection Agency, <https://www.epa.gov/aboutepa/our-mission-and-what-we-do> (viewed on July 10, 2018)

⁹⁸ Juliette Eilperin, “Scott Pruitt and a crew of EPA aides just spent four days in Morocco promoting natural gas,” *The Washington Post* (Dec. 13, 2017), <https://www.washingtonpost.com/news/energy->

Devon Energy, stood to benefit from increased LNG exports.⁹⁹ It was later learned that this trip, as well as other international trips Pruitt took or planned to take, were largely organized by lobbyists or others with business interests in the host countries.¹⁰⁰

3. EPA and Its Advisory Boards Have Been Stocked with Officials Tied to the Fossil Fuel Industry.

EPA under President Trump has established a pattern of acting in the interests of the fossil fuel industry, and has been stocked with staff with close ties to the fossil fuel industry. While former Administrator Pruitt, under whose authority the proposed “secret science” rule was issued, is perhaps the best known of EPA’s fossil fuel-connected appointees, he is far from the only one.

Bill Wehrum, the Assistant Administrator for Air and Radiation, is a longtime lawyer for the fossil fuel industry; he has repeatedly sued EPA to block clean air rules, and has represented API, the American Fuel and Petrochemical Manufacturers, and the Utility Air Regulatory Group, among others.¹⁰¹ EPA Office of Enforcement and Compliance Assurance (OECA) Deputy Assistant Administrator Patrick Traylor is a former lobbyist and lawyer for energy interests such as Dominion Energy, Koch Industries, and TransCanada, while OECA Assistant Administrator Susan Bodine is another alumna of Senator Inhofe’s office.¹⁰² Former Deputy Administrator and current Acting Administrator Andrew Wheeler was a longtime lobbyist for Murray Energy and is also an Inhofe alumnus.¹⁰³

[environment/wp/2017/12/13/scott-pruitt-and-a-crew-of-epa-aides-just-spent-four-days-in-morocco-promoting-natural-gas/?utm_term=.e1f7fa78c8fa](https://www.environment/wp/2017/12/13/scott-pruitt-and-a-crew-of-epa-aides-just-spent-four-days-in-morocco-promoting-natural-gas/?utm_term=.e1f7fa78c8fa)

⁹⁹ “More vigorous LNG market would benefit Oklahoma,” *The Oklahoman* (Dec. 14, 2016),

<https://newsok.com/article/5530744/more-vigorous-lng-market-would-benefit-oklahoma>

¹⁰⁰ Juliet Eilperin and Brady Dennis, “Influential outsiders have played a key role in Scott Pruitt’s foreign travel,” *The Washington Post* (May 3, 2018),

https://www.washingtonpost.com/national/health-science/influential-outsiders-have-played-a-key-role-in-scott-pruitts-foreign-travel/2018/05/03/db28fc6a-4ede-11e8-af46-b1d6dc0d9bfe_story.html?utm_term=.17d93a158c06

¹⁰¹ Industry Lawyer William Wehrum is Confirmed to Lead EPA Office of Air and Radiation, Environmental Defense Fund (Nov. 9, 2017), <https://www.edf.org/media/industry-lawyer-william-wehrum-confirmed-lead-epa-office-air-and-radiation>

¹⁰² Kevin Bogardus, Corbin Hiar, and Arianna Skibell, “Enforcement pick shugs off conflict-of-interest concerns,” *E&E News* (July 13, 2017), <https://www.eenews.net/stories/1060057347>

¹⁰³ Steven Mufson, “Scott Pruitt’s likely successor has a long lobbying history on issues before the EPA,” *The Washington Post* (July 5, 2018), https://www.washingtonpost.com/business/economy/epas-acting-administrator-has-long-lobbying-record-on-issues-before-the-agency/2018/07/05/a591cd40-6a6b-11e8-bea7-c8eb28bc52b1_story.html?utm_term=.02987956d928

In fact, Pruitt reached out to the fossil fuel industry to help staff EPA. Weeks after becoming EPA Administrator, he reportedly made a “plea” to top executives at API to help him identify oil and gas industry leaders he could hire as regional EPA Administrators.¹⁰⁴

Pruitt also sought to fill EPA’s Science Advisory Board (SAB) with individuals recommended by fossil fuel interests. Doug Deason, heir to a Texas fortune with significant fossil fuel holdings¹⁰⁵ and a donor to the Koch brothers network, recommended that EPA appoint Michael Honeycutt to lead the SAB.¹⁰⁶ Honeycutt is the lead toxicologist at the Texas Commission on Environmental Quality (TCEQ), and has a history of industry-friendly actions, including serving on the steering committee of at least one industry-funded group that routinely “whitewash[es] the work of industry.”¹⁰⁷ Pruitt appointed Honeycutt to lead the SAB.¹⁰⁸

API recommended fossil fuel industry insiders for appointment to the SAB including Merl Lindstrom, an executive at Phillips 66, and Robert Merritt, a retired executive from Total. Both were selected to serve.¹⁰⁹ Pruitt chose another new SAB member based on an American Public Gas Association recommendation.¹¹⁰

Pruitt also named Tony Cox to the SAB and made him the chair of EPA’s Clean Air Scientific Advisory Committee (CASAC). Cox has produced studies casting doubt on the health benefits of limiting fine particulates and ozone pollution. Much of his work has been funded by the fossil fuel and tobacco industries, with contributions from API, Philip Morris, the Western States Petroleum Association, the Western Oil and Gas Association, and the National

¹⁰⁴ Zahra Hirji, “EPA Chief Scott Pruitt Encouraged Oil Executives To Apply For Top Agency Jobs,” *Buzzfeed News* (June 25, 2018), https://www.buzzfeed.com/zahrahiR.J.i/scott-pruitt-recruited-oil-executives-trump-hotel?utm_term=.jozV4jpZr3#.dvMR3kjomO

¹⁰⁵ Leadership, Ryan, <http://www.ryan.com/about-ryan/leadership/doug-deason/> (viewed on July 10, 2018)

¹⁰⁶ Emily Holden and Anthony Adragna, “Major Trump donor helped Pruitt pick EPA science advisors,” *Politico* (June 8, 2018), <https://www.politico.com/story/2018/06/08/doug-deason-trump-donor-helped-pruitt-pick-epa-science-advisers-603450>

¹⁰⁷ Genna Reed, “Who Not to Pick for the EPA’s Science Advisory Board,” *Union of Concerned Scientists* (Sept. 26, 2017), <https://blog.ucsusa.org/genna-reed/who-not-to-pick-for-the-epas-science-advisory-board>

¹⁰⁸ *Id.*

¹⁰⁹ Emily Holden and Anthony Adragna, “Major Trump donor helped Pruitt pick EPA science advisors,” *Politico* (June 8, 2018), <https://www.politico.com/story/2018/06/08/doug-deason-trump-donor-helped-pruitt-pick-epa-science-advisers-603450>

¹¹⁰ Scott Waldman, “Gas group pushed for science advisory board member,” *E&E News* (July 19, 2018), <https://www.eenews.net/climatewire/2018/07/19/stories/1060089605>

Mining Association.¹¹¹ Internal EPA documents show that Yamada overruled a recommendation from EPA career staff to appoint someone independent from industry. Instead, he chose Cox.¹¹²

Other fossil fuel industry-linked appointments to the SAB include Larry Monroe, a retired executive at Southern Company,¹¹³ Anne Smith, an analyst at NERA Economic Consulting,¹¹⁴ and Stanley Young, a scientist affiliated with the notorious Heartland Institute.¹¹⁵ NERA Economic Consulting is frequently employed by the fossil fuel industry to write reports opposing rules limiting air pollution.¹¹⁶ The Heartland Institute receives much of its money from the fossil fuel¹¹⁷ and tobacco industries.¹¹⁸ One of Heartland's many low points was to compare climate scientists to the Unabomber. Milloy, one of the original architects of the "secret science" initiative, celebrated EPA's choices for the SAB, noting that seven of his recommendations were selected.¹¹⁹

At the same time as Pruitt filled the SAB with industry-affiliated people, he also announced that he would prohibit scientists receiving EPA grant money from serving on the SAB.¹²⁰ The

¹¹¹ "Multiple Industry-Funded Nominations to EPA's Clean Air Advisory Committee," DeSmogBlog (Sept. 1, 2017), <https://www.desmogblog.com/2017/09/01/multiple-industry-funded-nominations-epa-clean-air-advisory-committee>

¹¹² See, Appendix II

¹¹³ Sean Riley and Kevin Bogardus, "Boards add industry and state officials, drop scientists," *E&E News* (Nov. 3, 2017), <https://www.eenews.net/greenwire/2017/11/03/stories/1060065619>

¹¹⁴ Emily Atkin, "Scott Pruitt Declares War on Air Pollution Science," *The New Republic* (Oct. 31, 2017), <https://newrepublic.com/article/145582/scott-pruitt-declares-war-air-pollution-science>

¹¹⁵ Emily Atkin, "Scott Pruitt Declares War on Air Pollution Science," *The New Republic* (Oct. 31, 2017), <https://newrepublic.com/article/145582/scott-pruitt-declares-war-air-pollution-science>

¹¹⁶ National Economic Research Associates, SourceWatch, https://www.sourcewatch.org/index.php?title=National_Economic_Research_Associates (viewed on July 11, 2018)

¹¹⁷ Heartland Institute, SourceWatch, https://www.sourcewatch.org/index.php/Heartland_Institute#Funding (viewed on July 11, 2018)

¹¹⁸ Heartland Institute and tobacco, SourceWatch, https://www.sourcewatch.org/index.php/Heartland_Institute_and_tobacco (viewed on July 11, 2018)

¹¹⁹ Steve Milloy, "More Winning! JunkScience candidates fill 7 of 20 new EPA science advisor slots – Including BOTH chairman slots," *JunkScience* (Oct. 31, 2017), <https://junkscience.com/2017/10/more-winning-junkscience-candidates-fill-7-of-20-new-epa-science-adviser-slots-including-both-chairman-slots/>

¹²⁰ Brady Dennis, Juliet Eilperin, and Chris Mooney, "In unprecedented move, EPA to block scientists who get agency funding from serving as advisors," *The Washington Post* (Oct. 30, 2017), https://www.washingtonpost.com/news/energy-environment/wp/2017/10/30/in-unprecedented-shift-epa-to-prohibit-scientists-who-receive-agency-funding-from-serving-as-advisers/?utm_term=.1bdf58758a5

result of these decisions was to exclude independent scientists and favor fossil fuel industry insiders and those funded by the fossil fuel and tobacco industries.

C. Independent Experts Oppose EPA's Industry-Friendly Proposed Rule

The proposed rule states that it “takes into consideration the policies or recommendations of third party organizations who advocated for open science.”¹²¹ The proposed rule further states that it is “informed by the policies recently adopted by some major scientific journals” and cites the “replication crisis” as a motivating factor for these policies.¹²² This is simply incorrect.

EPA's alleged supporters can be divided into two categories: organizations or individuals closely tied to the tobacco and/or fossil fuel industries, and organizations or individuals whose work is free of the bias that comes with being dependent upon industry for funding.

A paper published by two economists affiliated with George Mason University's Mercatus Center to justify the proposed rule's benefits falls into the first category.¹²³ Both George Mason University and the Mercatus Center have received substantial funding from the network of donors, foundations, and trusts affiliated with the Koch brothers; donors including the Kochs have even been given a say in faculty hiring decisions.¹²⁴ The lead author of the Mercatus Center paper cited by EPA has also been affiliated with several industry groups. The author was linked with the now-defunct Annapolis Center for Science-Based Public Policy, which was funded by ExxonMobil, API, and Philip Morris and was involved in TASSC's early work pushing the “secret science” initiative.¹²⁵ The author also has ties to the American Enterprise Institute, which has received substantial funding from ExxonMobil, Philip Morris, the Koch network, and the Sarah Scaife Foundation, whose money comes in part from the Mellon oil fortune.¹²⁶

¹²¹ “Strengthening Transparency in Regulatory Science,” 83 FR 18768, 18770, <https://www.federalregister.gov/documents/2018/04/30/2018-09078/strengthening-transparency-in-regulatory-science>

¹²² *Id.* at 18770

¹²³ *Id.* at 18774

¹²⁴ Erica L. Green and Stephanie Saul, “What Charles Koch and Other Donors to George Mason University Got for Their Money,” *The New York Times* (May 5, 2018),

<https://www.nytimes.com/2018/05/05/us/koch-donors-george-mason.html>

¹²⁵ Annapolis Center for Science-Based Public Policy, DeSmog Blog, <https://www.desmogblog.com/annapolis-center-science-based-public-policy> (viewed on July 26, 2018)

¹²⁶ American Enterprise Institute, SourceWatch, https://www.sourcewatch.org/index.php/American_Enterprise_Institute#Funding (viewed on July 27, 2018)

The other sources of expertise that EPA claim support its rule fall into the latter category, independent scientists and scientific groups. And despite EPA's claims, almost all of them have rejected the proposed rule, criticized it, or distanced themselves from it. The lead author of the two bipartisan reports cited by EPA in support of the proposed rule, the Administrative Conference of the United States' Science in the Administrative Process Project and the Bipartisan Policy Center's Science for Policy Project, actually stated that EPA didn't "adopt any of the recommendations of the sources [it] cite[s]" and noted that her colleagues "would laugh and hoot" at the ideas put forth in the proposed rule.¹²⁷

The president of the Health Effects Institute noted that because it is costly and difficult to protect patient privacy, the kind of data reanalysis the rule promotes should only be done sparingly.¹²⁸ And while the Health Effects Institute has a policy not to take public positions on regulatory questions, its president stated that the Institute's own data policy, which EPA claims supports the proposed rule, is "not quite what's being proposed here."^{129,130}

The executive director of the Center for Open Science, also cited as supporting the proposed rule, stated that it was "20 percent off the rails."¹³¹

The editors of the journals cited by EPA in support of its proposed rule, *Proceedings of the National Academies of the Sciences*, *Public Library of Science (PLOS) ONE*, *Science*, and *Nature*, published a joint statement in which they rejected the aims of the proposed rule, writing:

¹²⁷ Robinson Meyer, "Even Geologists Hate the EPA's New Science Rule," *The Atlantic* (July 17, 2018), <https://www.theatlantic.com/science/archive/2018/07/scott-pruitts-secret-science-rule-could-still-become-law/565325/>

¹²⁸ The Health Effects Institute has extremely relevant expertise with respect to the cost and difficulty of reanalysis, as it was chosen to reanalyze the Harvard Six Cities study and the American Cancer Society study on the mortality rates associated with fine particulate matter that the fossil fuel industry was so desperate to discredit. The reanalysis confirmed the studies' original findings. See, Reanalysis of the Harvard Six Cities Study and the American Cancer Society Study of Particulate Air Pollution and Mortality, pgs. iii – iv, Health Effects Institute (June 2000), <https://www.healtheffects.org/system/files/HEI-Reanalysis-2000.pdf>

¹²⁹ Francie Diep, "Opponents Show Up in Force at a Hearing for the EPA's Controversial 'Secret Science' Rule," *Pacific Standard* (July 17, 2018), <https://psmag.com/environment/opponents-show-up-in-force-at-a-hearing-for-the-epas-controversial-secret-science-rule>

¹³⁰ The Health Effects Institute receives roughly half of its funding from EPA and half from industry, including ExxonMobil. It is therefore unlikely to expect this group to be too critical of EPA or industry for fear of losing its funding. See, Sponsors, Health Effects Institute, <https://www.healtheffects.org/about/sponsors> (viewed on July 30, 2018)

¹³¹ Daniel Engber, "Could Scott Pruitt Have a Point," *Slate* (May 14, 2018), <https://slate.com/technology/2018/05/does-the-epas-call-for-transparency-in-science-make-any-sense.html>

It does not strengthen policies based on scientific evidence to limit the scientific evidence that can inform them; rather, it is paramount that the full suite of relevant science vetted through peer review, which includes ever more rigorous features, inform the landscape of decision-making. Excluding relevant studies simply because they do not meet rigid transparency standards will adversely affect decision-making processes.¹³²

Although his articles in *Nature*, *PLOS One*, and *Science* were cited by EPA, John Ioannidis strenuously objected to the proposed rules, writing in *PLOS*:

A new standard currently proposed for the Environmental Protection Agency aims to ban the use of scientific studies for regulatory purposes unless all their raw data are widely available in public and can be reproduced. If the proposed rule is approved, science will be practically eliminated from all decision-making processes. Regulation would then depend uniquely on opinion and whim.¹³³

In addition to the criticism EPA received from the individuals, organizations, and publications it cited as supporting the proposed rule, virtually the entire scientific community opposed the proposed rule. The American Association for the Advancement of Science,¹³⁴ sixty nine public health and scientific groups,¹³⁵ and almost 1000 individual scientists¹³⁶ publicly opposed the rule.

¹³² Jeremy Berg, Philip Campbell, Veronique Kiermer, Natasha Raikhel, and Deborah Sweet, “Joint statement on EPA proposed rule and public availability of data,” *Science* (April 30, 2018), [http://science.sciencemag.org/content/early/2018/04/30/science.aau0116?_utma=89778187.185530335.1532657039.1532657130.1532657130.1&_utmb=89778187.0.10.1532657130&_utmc=89778187&_utmx=-&_utmz=89778187.1532657130.1.1.utmcsr=google|utmccn=\(organic\)|utmcmd=organic|utmctr=\(not%20provided\)&_utmv=-&_utm=30718966](http://science.sciencemag.org/content/early/2018/04/30/science.aau0116?_utma=89778187.185530335.1532657039.1532657130.1532657130.1&_utmb=89778187.0.10.1532657130&_utmc=89778187&_utmx=-&_utmz=89778187.1532657130.1.1.utmcsr=google|utmccn=(organic)|utmcmd=organic|utmctr=(not%20provided)&_utmv=-&_utm=30718966)

¹³³ John Ioannidis, “All science should inform policy and regulation,” *PLOS* (May 3, 2018), <http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1002576>

¹³⁴ AAAS Statement on EPA Administrator’s Plan to Disallow Use of Scientific Evidence in Decision-Making, American Association for the Advancement of Science (April 20, 2018), https://mcmprodaaas.s3.amazonaws.com/s3fs-public/AAAS%20Statement%20on%20EPA%20Administrators%20Plan%20to%20Disallow%20Use%20of%20Scientific%20Evidence%20in%20Decision-Making.pdf?8VbTPspoSi_h9OpYeyea_dw4jeYph9x8

¹³⁵ Public health, medical, academic, and scientific groups oppose EPA transparency rule, <https://mcmprodaaas.s3.amazonaws.com/s3fs-public/EPA%20Transparency%20Rule%20FINAL.pdf?oNbdIjRo8Ick2LxdMeWaqWuYu4NM3unc> (viewed on July 27, 2018)

¹³⁶ Don’t Restrict EPA’s Ability to Rely on Science, <https://s3.amazonaws.com/ucs-documents/science-and-democracy/secret-science-letter-4-23-2018.pdf> (viewed on July 27, 2018)

III. Argument¹³⁷

The proposed rule is illegal because it is arbitrary and capricious, and it is arbitrary and capricious in at least three ways. First, the proposed rule grants the Administrator broad discretion to determine whether its terms apply, effectively making it a rule establishing the whim of the Administrator. Particularly in an agency so captured by industry, this cannot be tolerable in a nation of laws. Second, the proposed rule is not supported by any independent authority. Third, the proposed rule is not the product of reasoned decision-making; it is a deliverable, pre-ordained by interested parties laden with bias.

Separately, and in addition, the proposed rule is illegal because it is the result of an effective delegation of rulemaking authority to private interests.¹³⁸

A. **The Proposed Rule is Arbitrary and Capricious**

The Administrative Procedure Act¹³⁹ permits courts to set aside agency actions found to be “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law.”¹⁴⁰ In determining whether an agency action was “arbitrary and capricious, the courts look to several factors, whether: “(1) the agency ‘relied on factors which Congress has not intended it to consider,’ (2) the agency ‘failed to consider an important aspect of the problem,’ (3) the agency explained its decision in a way ‘that runs counter to the evidence,’ or (4) the action ‘is

¹³⁷ This comment does not purport to make all of the arguments against the proposed rule. Beyond the arbitrary and capricious and non-delegation arguments, discussed below, it is important to also mention two additional reasons why the proposed rule is illegal. First, it is illegal for any agency to refuse to consider a comment or submission to the agency on any proposed rule – including comments containing scientific findings based on private or protected individual data. Second, numerous laws such as the Clean Air Act require the use of the best available science when implementing their provisions; the proposed rule would run afoul of such laws and hinder their proper implementation.

¹³⁸ In a previous comment on EPA’s proposal to rescind the Clean Power Plan, some of the authors of this comment argued that that proposal should be seen by the courts as a product of former Administrator Pruitt’s “unalterably closed mind.” We note that when the political leadership of an agency has been as thoroughly captured by industry as has EPA’s, rulemakers’ minds will often be unalterably closed to any proposals other than those championed by the industries to which they are beholden. *See*, Comment submitted by Senators Sheldon Whitehouse, Jeffrey A. Merkley, Brian Schatz, and Edward J. Markey, Feb. 6, 2018, available at <https://www.regulations.gov/document?D=EPA-HQ-OAR-2017-0355-17190> (viewed on August 14, 2018)

¹³⁹ 5 USC §500 *et seq.*

¹⁴⁰ 5 USC §706(2)(a)

so implausible that it could not be ascribed to a difference in view or the product of agency expertise.”¹⁴¹

Courts have also held that a rule is arbitrary and capricious if the promulgating agency did not “genuinely engage in reasoned decision making”¹⁴² or if it did not “articulate a satisfactory explanation for its action including a ‘rational connection between the facts found and the choice made.’”¹⁴³

1. The Proposed Rule Gives the Administrator Almost Unfettered Discretion to Exempt Scientific Studies from its Data Transparency Requirements

EPA’s proposed rule provides the Administrator with broad authority to waive its data publication requirements.¹⁴⁴ Specifically, the Administrator can exempt from the rule’s data disclosure requirement any study where such a requirement would conflict with the law, privacy concerns, confidentiality considerations, confidential business information (CBI), or national security.¹⁴⁵ However, the proposed rule provides no guidelines, criteria, or instructions to ensure that this exemption provision is applied consistently and is not used to advantage or disadvantage scientific studies from a particular source. As a result, it is effectively not a rule at all, but a vehicle for the Administrator’s almost unfettered discretion.

Given the strong objections the chemical industry expressed to a blanket data publication requirement and EPA’s apparent eagerness to allay the chemical industry’s concern, it would appear that this exemption provision was specifically designed with the chemical industry in mind. Providing the Administrator the ability to exempt any study from the proposed rule’s requirements is the solution that Richard Yamada found to address Nancy Beck’s concerns that the proposed rule’s data transparency requirements would exclude many chemical

¹⁴¹ *Mendoza v. Secretary, Department of Homeland Security*, 851 F.3d 1348, 1353 (11th Cir. 2017) (quoting *Miccosukee Tribe of Indians of Fla. v. United States*, 566 F.3d 1257, 1264 (11th Cir. 2009))

¹⁴² *Greater Boston Television Corp. v. FCC*, 444 F.2d 841, 851 (D.C. Cir. 1970)

¹⁴³ *Motor Vehicle Manufacturers Association v. State Farm Mutual Automobile Insurance Co.*, 463 US 29, 43 (1983), quoting *Burlington Truck Lines, Inc. v. United States*, 371 U. S. 156, 168 (1962)

¹⁴⁴ “Strengthening Transparency in Regulatory Science,” 83 FR 18768, 18774, <https://www.federalregister.gov/documents/2018/04/30/2018-09078/strengthening-transparency-in-regulatory-science>

¹⁴⁵ “Strengthening Transparency in Regulatory Science,” 83 FR 18768, 18774, <https://www.federalregister.gov/documents/2018/04/30/2018-09078/strengthening-transparency-in-regulatory-science>

industry-funded studies. This waiver provision constitutes Yamada's attempt to "thread this one real tight."¹⁴⁶

Providing the Administrator with the authority to exempt certain studies from the proposed rule's data transparency requirements without making any effort to ensure that this exemption authority will be fairly or consistently applied is the very definition of arbitrary and capricious. The proposed rule would give the Administrator carte blanche to include studies from sources he likes or with findings he prefers, while allowing studies from disfavored sources or with inconvenient conclusions to be excluded from consideration.

As a result, studies funded by the chemical industry could be exempted from the proposed rule's data publication requirements based on CBI concerns while studies by independent academic researchers *of the same chemicals* might not be, even if underlying health data raised privacy concerns. It would depend on the whim, and the biases, of the Administrator. This EPA in particular cannot be allowed such discretion.

2. There Is Almost No Independent Expert Support For Pruitt's Proposed Rule

Essentially all of the independent expert individuals and organizations EPA cited in support of its proposed rule have publicly disavowed or criticized the rule, as discussed in Part II C of this comment. The editors of all the scientific journals cited by EPA stated apropos of the proposed rule that "[e]xcluding relevant studies simply because they do not meet rigid transparency standards will adversely affect decision-making processes."¹⁴⁷ A co-author of the scientific articles cited by EPA stated that "[i]f the proposed rule is approved, science will be practically eliminated from all decision-making processes. Regulation would then depend uniquely on opinion and whim."¹⁴⁸

¹⁴⁶ January 31, 2018 7:54 PM email from Richard Yamada to Nancy Beck, Erik Baptist, and Justin Schwab, <https://www.expressnews.com/news/local/article/Lamar-Smith-EPA-10924598.php> (viewed on June 27, 2018)

¹⁴⁷ Jeremy Berg, Philip Campbell, Veronique Kiermer, Natasha Raikhel, and Deborah Sweet, "Joint statement on EPA proposed rule and public availability of data," *Science* (April 30, 2018), [http://science.sciencemag.org/content/early/2018/04/30/science.aau0116?_utma=89778187.185530335.1532657039.1532657130.1532657130.1&_utmb=89778187.0.10.1532657130&_utmc=89778187&_utmx=-&_utmz=89778187.1532657130.1.1.utmcsr=google|utmccn=\(organic\)|utmcmd=organic|utmctr=\(not%20provided\)&_utmv=-&_utmik=30718966](http://science.sciencemag.org/content/early/2018/04/30/science.aau0116?_utma=89778187.185530335.1532657039.1532657130.1532657130.1&_utmb=89778187.0.10.1532657130&_utmc=89778187&_utmx=-&_utmz=89778187.1532657130.1.1.utmcsr=google|utmccn=(organic)|utmcmd=organic|utmctr=(not%20provided)&_utmv=-&_utmik=30718966)

¹⁴⁸ John Ioannidis, "All science should inform policy and regulation," *PLOS* (May 3, 2018), <http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1002576>

EPA apparently did not consult with the individuals and organizations it cited in support of its proposed rule. It also ignored the scientific community, essentially all of which opposed the rule.

The disconnect between EPA's proposed rule and the scientific community suggests one of two things. At best, EPA didn't understand the scientific community's recommendations for handling challenges related to reproducibility. At worst, EPA understood perfectly well that the scientific community was not proposing to exclude public health studies from rulemaking, but chose to distort the scientific community's efforts for its own industry-championed, anti-science campaign. In either case, EPA's justification for the proposed rule "runs counter to the evidence."¹⁴⁹

3. EPA Has Not Engaged In Reasoned Decision-Making In Developing This Rule.

While judicial review of agency actions is usually "exceedingly deferential,"¹⁵⁰ when, given the totality of the circumstances, the agency appears not to have engaged in reasoned decision-making, a rule should be invalidated.

The scope of review under the "arbitrary and capricious" standard is narrow and a court is not to substitute its judgment for that of the agency. Nevertheless, the agency must examine the relevant data and articulate a satisfactory explanation for its action including a "rational connection between the facts found and the choice made." In reviewing that explanation, we must "consider whether the decision was based on a consideration of the relevant factors and whether there has been a clear error of judgment."¹⁵¹

This heightened level of scrutiny calls on a court to "intervene not merely in case of procedural inadequacies, or bypassing of the mandate in the legislative charter, but more broadly if the court becomes aware, especially from a combination of danger signals, that the agency has not really taken a 'hard look' at the salient problems, and has not genuinely engaged in reasoned decision-making."¹⁵²

¹⁴⁹ *Micosukee Tribe of Indians of Fla. v. United States*, 566 F.3d 1257, 1264 (11th Cir. 2009)

¹⁵⁰ *See, e.g., Fund for Animals v. Rice*, 85 F.3d 535, 541 (11th Cir. 1996)

¹⁵¹ *Motor Vehicle Manufacturers Association v. State Farm Mutual Automobile Insurance Co.*, 463 US 29, 43 (1983), quoting *Burlington Truck Lines, Inc. v. United States*, 371 U. S. 156, 168 (1962) and *Bowman Transportation, Inc. v. Arkansas-Best Freight System, Inc.*, *supra*, at 419 U. S. 285. *See also Massachusetts v. EPA* (constraining EPA's discretion and subjecting the agency's deferral of a decision to hard look review)

¹⁵² *Greater Boston Television Corp. v. FCC*, 444 F.2d 841, 844-5 (D.C. Cir. 1970)

In *Greater Boston Television Corp. v. FCC*, the biggest “danger signal” that caused the court to give an agency’s actions a “hard look” was the fact that the chair of the Federal Communications Commission (FCC) had had potentially improper contacts with an executive at one of companies competing for a broadcast license to be attributed by the agency.¹⁵³ Other “danger signals” that courts have held to trigger heightened scrutiny of agency actions include “abrupt shifts in policy,”¹⁵⁴ and “where the agency has demonstrated undue bias towards particular private interests.”¹⁵⁵ These concerns are epidemic for this proposed rule.

As detailed in Part II A of this comment, the proposed rule is the result of a long, tobacco and fossil fuel industry-led campaign to limit the use of science in rulemaking. This campaign focused on limiting the use of public health studies that demonstrate dramatically negative health consequences of smoking and breathing polluted air. The trick was to take advantage of the private nature of underlying individual health care information (a value worth protecting), and twist that into a faux concern about “secret science.”

Part II B lays out the myriad connections between Pruitt, congressional champions of this proposed rule, and the EPA political appointees who developed it, and the fossil fuel and tobacco industries who have campaigned for it for decades. This long and well-documented record is rife with the sort of “danger signals” the courts have found to warrant “hard look” review. Potentially improper contacts between regulators and regulated industries,¹⁵⁶ “abrupt shifts in policy,”¹⁵⁷ and “undue bias towards particular private interests”¹⁵⁸ are all present in this tawdry trail of industry capture. Based on this record, no court could conclude that EPA “genuinely engaged in reasoned decision making”¹⁵⁹ nor did it “articulate a satisfactory explanation for its action including a ‘rational connection between the facts found and the choice made.’”¹⁶⁰

B. The Proposed Rule is an Illegal Delegation of Agency Rulemaking Authority to the Industries It Regulates.

Just as an agency rulemaking will be set aside if a court determines that it was arbitrary and capricious, an agency rulemaking should be invalidated if a court finds that the agency delegated its rulemaking authority to one or more private interests, because Congress “cannot

¹⁵³ *Id.*

¹⁵⁴ *United Church of Christ v. FCC*, 707 F.2d 1413, 1425 (D.C. Cir. 1983)

¹⁵⁵ *NRDC v. SEC*, 606 F.2d 1031, 1050 (D.C. Cir. 1979)

¹⁵⁶ *Greater Boston Television Corp. v. FCC*, 444 F.2d 841, 844-5 (D.C. Cir. 1970)

¹⁵⁷ *United Church of Christ v. FCC*, 707 F.2d 1413, 1425 (D.C. Cir. 1983)

¹⁵⁸ *NRDC v. SEC*, 606 F.2d 1031, 1050 (D.C. Cir. 1979)

¹⁵⁹ *Greater Boston Television Corp. v. FCC*, 444 F.2d 841, 851 (D.C. Cir. 1970)

¹⁶⁰ *Motor Vehicle Manufacturers Association v. State Farm Mutual Automobile Insurance Co.*, 463 US 29, 43 (1983), quoting *Burlington Truck Lines, Inc. v. United States*, 371 U. S. 156, 168 (1962)

delegate regulatory authority to a private entity.”¹⁶¹ “Although objections to delegations are “typically presented in the context of a transfer of legislative authority from the Congress to agencies, [...] the difficulties sparked by such allocations are even more prevalent in the context of agency delegations to private individuals.”¹⁶²

While it is clear that an agency may not *explicitly* delegate its rulemaking authority to private interests, an agency that *implicitly* delegates its rulemaking authority to private interests raises the same concerns. An agency is effectively captured by the private interests it regulates when its “regulation is . . . directed away from the public interest and toward the interest of the regulated industry’ by ‘intent and action’ of industries and their allies.”¹⁶³

As described above, the proposed rule was the product of a process that was effectively delegated to industry, with EPA serving as little more than a rubber stamp on an industry-sought and industry-drafted proposal. The evidence is overwhelming that the proposed rule was conceived by the tobacco industry and then advanced by the tobacco and fossil fuel industries and the network of individuals and front groups they have funded for more than two decades.

Steve Milloy and Christopher Horner, two of the biggest players in industry’s “secret science” campaign, even worked for President Trump’s EPA transition team, and one boasted that he was “inside the Administrator’s office” on the day the proposed rule was announced. Richard Yamada, the political appointee drafting the proposed rule, spent most of his Washington career working for Representative Lamar Smith, the primary congressional champion of the “secret science” initiative, who also happens to count the fossil fuel industry as his biggest donors. It was Smith whose meeting with Pruitt apparently triggered the drafting of the proposed rule. Brittany Bolen, Ryan Jackson, and Erik Baptist, the other political appointees involved in drafting the proposed rule, all previously worked for Senator James Inhofe, another fossil fuel industry-funded congressional champion of the rule.

The fossil fuel industry and its long-time “secret science” allies quickly took advantage of Scott Pruitt’s ascendancy at EPA. At least one company – Chevron – included the “secret science” initiative on its EPA wish list. The fact that Pruitt resigned in disgrace as EPA

¹⁶¹ *Ass’n of American Railroads v. USDOT*, 721 F.3d 666, 670 (D.C. Cir. 2013) rev’d on other grounds

¹⁶² *Id.*, quoting *Nat’l Ass’n of Regulatory Util. Comm’rs v. FCC*, 737 F.2d 1095, 1143 (DC Cir. 1984).

¹⁶³ Lindsey Dillon, *et al.*, “The Environmental Protection Agency in the Early Trump Administration: Prelude to Regulatory Capture,” *American Journal of Public Health* (April 2018), <https://ajph.aphapublications.org/doi/10.2105/AJPH.2018.304360>, quoting, Daniel Carpenter, editor, *Preventing Regulatory Capture: Special Interest Influence and How to Limit It*, pg. 73, Cambridge University Press (2014)

Administrator after the publication of the proposed rule does not allay these concerns. The man is gone, but his conflicts and the flawed process he oversaw lingers on.

Moreover, the capture of EPA goes deeper than just Scott Pruitt. The case for agency capture survives his departure. Numerous EPA political appointees, all of whom have their own significant ties to the fossil fuel industry, were intimately involved in this rulemaking. In fact, current EPA Acting Administrator Andrew Wheeler, who will oversee the rulemaking process going forward, has his own deep ties to the fossil fuel industry.

We are not the only ones to conclude that EPA under the current administration has been captured by industry. A recently published article in the *American Journal of Public Health* finds that EPA is exhibiting many signs of regulatory capture.¹⁶⁴ The authors of this article examined EPA actions from December 2016 through June 2017 and they interviewed 45 current and retired EPA employees. Among their findings pointing to regulatory capture:

- “Appointees have deep ties with industries.”
- “Significant policy changes at the EPA favor businesses and industry, while probably incurring considerable health and environmental consequences.”
- “Pruitt has regularly championed the interests of regulated industries, while rarely affirming environmental and health protections.”
- “Pruitt dismissed many members of the EPA’s Science Advisory Board and its Board of Scientific Counselors, created a new rule preventing EPA-funded scientists from serving on those boards, and—for the first time in agency history—allowed lobbyists on scientific advisory boards.”
- “Pruitt’s own meetings and schedule... are almost exclusively with company and trade organizations and rarely with environmental, public health, or citizen groups.”¹⁶⁵

The extreme and well-documented regulatory capture of EPA has effectively delegated its authority to the industry or industries that have captured it. There is no substantive difference between an agency explicitly telling a company or industry to write a rule for it, and an agency telling a company or industry that it will write whatever rule the company or industry wants. Like Scott Pruitt’s Devon Energy letter, the substance is all industry, whatever the letterhead, and the public interest is ignored.


¹⁶⁴ Lindsey Dillon, *et al.*, “The Environmental Protection Agency in the Early Trump Administration: Prelude to Regulatory Capture,” *American Journal of Public Health* (April 2018)


¹⁶⁵ *Id.*

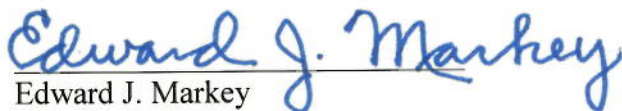
For the foregoing reasons, we, the undersigned United States Senators, respectfully urge EPA to withdraw this proposed rule.


Sheldon Whitehouse
United States Senator



Brian Schatz
United States Senator


Margaret Wood Hassan
United States Senator

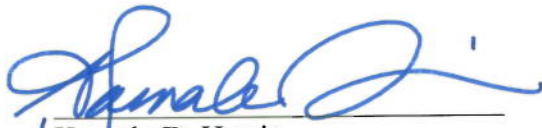

Jeffrey A. Merkley
United States Senator


Edward J. Markey
United States Senator


Tammy Duckworth
United States Senator


Thomas R. Carper
United States Senator


Kirsten Gillibrand
United States Senator


Kamala D. Harris
United States Senator



John S. Watson
Chairman and Chief Executive Officer

February 23, 2017

Transmitted Via Email: Jones.Knolyn@epa.gov

The Honorable Edward Scott Pruitt
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue NW
Washington, DC 20460

Dear Administrator Pruitt:

Congratulations on your appointment as Administrator of the Environmental Protection Agency. I am confident your extensive experience in government, both in the state legislature and as Attorney General of Oklahoma, will be valuable in your new role.

The Environmental Protection Agency plays an essential role in continuing our national energy dividend. Responsible development of America's abundant energy resources creates millions of good paying jobs and has the potential to add significant tax revenues to local, state and federal treasuries. We support your commitment to pursuing policies that balance our national economic, environmental and energy security priorities.

We have written to President Trump to outline Chevron's view of the role that strong energy policy can play in the future of our country and internationally. Our recommendations to President Trump are attached for your consideration. We believe that consulting with stakeholders in the business community, particularly the energy industry, can significantly improve policymaking. We can do more to ensure our nation's energy security and protect our environment by working together.

Our government affairs team, led by Maria Pica Karp, Vice President and General Manager of Government Affairs, will be requesting a meeting for us during my next trip to Washington on March 21-23, 2017. I look forward to meeting with you at that time. In the interim, I hope that you will consider Chevron as a resource and extend my very best wishes for a successful tenure.

Sincerely,

A handwritten signature in black ink, appearing to read "John S. Watson".

Enclosures

Chevron Corporation
6001 Bollinger Canyon Road, San Ramon, CA 94583
Tel 925 842 3232 Fax 925 842 1230
swat@chevron.com

Economic Growth and Energy Development

Summary

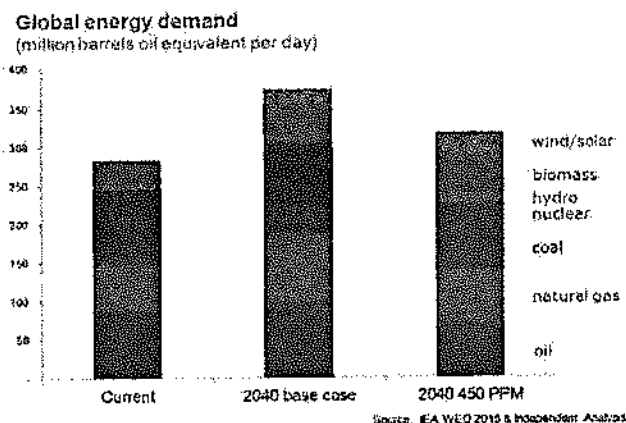
- U.S. leadership in oil and natural gas production provides a national energy dividend that supports economic growth and high quality middle-class jobs.
- Policies should support domestic energy development.
- Oil and gas development, including on federal lands, provides economic opportunity.
- Energy infrastructure investment is needed to meet changing demand.

Due to continued application of advanced technologies and innovation, the U.S. has transitioned from energy scarcity to energy abundance. Our nation is just beginning to reap dividends from this significant achievement. Families are benefiting from lower energy prices and manufacturers are advantaged by lower feedstock costs. Despite the down turn in prices, Chevron continues to provide high quality jobs and supply energy globally in an affordable, reliable, and responsible manner.

Discussion

The oil and gas industry is a major contributor to the U.S. economy. Globally, oil and gas provide approximately half of all energy needs today and are projected to continue to do so for the foreseeable future. In the U.S., oil and gas provide approximately two thirds of our energy today and are expected to be a comparable part of our energy mix in 2040. This significant component of the economy supported 9.8 million jobs (5.6% of total U.S. employment) and contributed \$1.2 trillion to the national GDP at its recent high in 2011 (8% of total GDP). Since 2014, the oil and gas sector has been coping with a down cycle in energy prices, and crude oil prices have fallen by about 50%. Even during this downturn, in 2015 Chevron alone

spent over \$15 billion with U.S. suppliers, including over \$2 billion with small businesses and nearly \$800 million with women and minority-owned businesses.



Over the long term, our industry will continue to support millions of U.S. jobs and create thousands of new ones each year. By 2035, the energy and petrochemicals industries are expected to provide up to 1.9 million new high-quality jobs.

A robust oil and gas industry results in positive contributions to other industries and government. Recent advancements in hydraulic fracturing and horizontal drilling provide the basis for fueling economic growth in the decades to come. In addition to supporting high-quality jobs in the energy sector, oil and gas development benefits other industries including manufacturing. Increased domestic natural gas production supports the strong growth projected in domestic manufacturing through 2025. In 2015, domestic production from shale and the accompanying lower natural gas prices contributed to a manufacturing resurgence and resulted in an estimated \$190 billion to GDP, 1.4 million new jobs, and \$156 billion in disposable income to the U.S. economy. In addition to income taxes, America's oil and natural gas industry also pays the federal government rents, royalties and lease payments – totaling nearly \$120 billion since 2000. A continued national energy dividend will



November 2016

require industry investment, which government policy should encourage.

Increased oil and gas development on federal lands is needed. Onshore and offshore oil and gas resource development is safe, environmentally sound, and compatible with the long-term management of federal lands. Overall domestic oil and gas production has increased more than 70% and 20% respectively from 2010 to 2015. During the same period, production on federal lands decreased by approximately 3% and 40% respectively. Development of onshore and offshore resources could provide up to 130 billion barrels of oil and 1.5 quadrillion cubic feet of natural gas. This is enough energy to fuel 94 million cars for 50 years and heat all 66 million U.S. households that use natural gas heating for more than 300 years.

Maintaining a leadership position on energy requires energy infrastructure investment. U.S. energy infrastructure investment is an opportunity for both job creation and sustaining our national energy dividend. New and modernized energy infrastructure investment is needed as demand for various energy supplies (e.g. oil, gas, and electricity) changes. Uncertainty related to energy infrastructure increases costs and hinders development of all forms of energy. For example, uncertainty related to permitting of new pipelines can hinder development of new efficient natural gas power plants that supply electricity and provide back up for intermittent renewable electricity sources. Increased production and efficient use of natural gas contributes towards affordable energy for consumers and manufacturers.

Recommendations

Support domestic energy production to sustain the U.S. as a global energy leader and support the economy. Policies should balance economic, security, and environmental concerns. This is the case for both the development of new and implementation of

existing policies. Policies should encourage expansion of energy production through: 1) increased recognition and consideration of the benefits derived from the oil and gas sector; 2) improved coordination among government agencies to advance project permitting; and 3) elimination of overlapping and duplicative regulations such as methane emissions requirements called for by EPA, BLM, and several states.

Continue and expand development of energy resources on federal lands onshore and offshore. Agencies should be given the authority and directive to go forward with onshore and offshore federal leasing plans. These plans should be designed to assure robust industry participation, resulting in economic benefits for industry and the nation as a whole.

Support strategic and sustained energy infrastructure investment. The review and approval process for energy infrastructure permits should be well defined, transparent, and predictable. Changes to processes should not be applied retroactively. Infrastructure permitting hurdles can negatively impact development and deployment of all forms of energy. Improving these processes should be a high priority.



November 2016

Regulatory Framework

Summary

- Regulations should protect health, safety, and the environment while promoting a strong economy and energy security.
- Regulations should be based on rigorous cost-benefit analysis, sound science, and pragmatic pathways for implementation.
- Increased stakeholder engagement and transparent communication of costs and benefits is needed.
- Significant expansion of federal regulations could negatively impact investment in energy projects that produce jobs and provide revenues to treasuries.

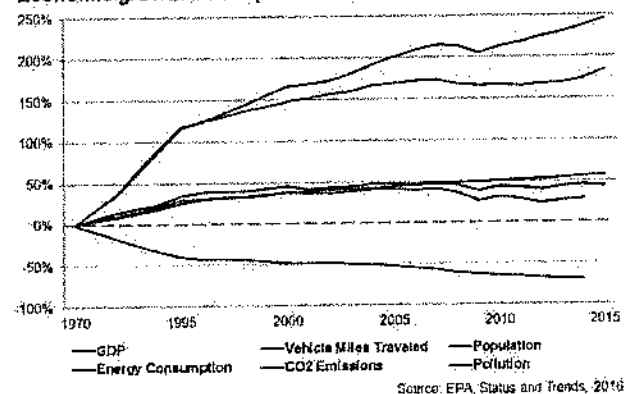
Regulations aim to protect health, safety, and the environment. Along with the U.S. energy resurgence, there has been a notable increase in federal regulations as policies are still adjusting to an era of energy abundance. If regulations become overly burdensome, they hinder investment and innovation. Therefore, it is important that the U.S. have an efficient and effective regulatory framework that reduces economic burden while protecting health, safety and environmental quality. Meaningful regulatory reform could support the continuation of the American energy dividend that has helped improve our economy, environment, and domestic and international security.

Efficient and effective regulations that protect the environment, health and safety are in everyone's interest. Every day, Chevron employees responsibly manage our operations in full compliance with all applicable laws and regulations, including those governing the environment, health, and safety. We make positive contributions to the areas in which we operate and the markets we serve. Chevron's continued investment is valued by the communities we work in and our shareholders.

Discussion

A pragmatic regulatory framework can achieve environmental and economic growth goals. Over the last several decades, the U.S. has made measurable progress in achieving its environmental objectives. The air in urban areas in the U.S. is far cleaner than it was in 1970. From 1970 to 2014, aggregate national emissions of the six common pollutants alone dropped an average of 69% while gross domestic product grew by 238%. For example, since 1980, national averages of sulfur dioxide and carbon monoxide emissions are each down 84%. Particulate matter concentrations (i.e., smoke and soot) are down over 20% since 2000, when trend data began for fine particles. Ozone concentration levels are down 32% from 1980 levels. These are impressive accomplishments, and real examples of responsible development. They are proof that growth does not have to come at the expense of the environment. New regulations, however, could be a barrier to continued economic growth because they may result in diminishing benefits for the costs imposed. For example, the new National Ambient Air Quality Standard for ozone is at background levels in many areas (i.e., any emissions that are not related to human activity in that area).

Economic growth and Improved environment



Regulatory expansion could harm the U.S. energy renaissance. Federal regulation is estimated to cost approximately \$2 trillion



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annually. This represents a cost of over \$16,000 annually to the average American household. The cost of all new regulations finalized in 2015 alone is estimated at \$197 billion. Regulatory overreach is impacting our ability to grow the energy economy. The EPA's Waters of the U.S. Rule and BLM's Hydraulic Fracturing Rule are examples where agencies took expansive approaches to their authority and courts had to step in. Ensuring agencies stay within their statutory authority is necessary to avoid protracted litigation, reduce uncertainty, and achieve underlying policy objectives.

An effective regulatory framework requires robust cost-benefit analysis, sound scientific basis, and practical pathway for implementation.

A principal component of an effective regulatory regime is robust cost-benefit analysis (CBA) to understand the trade-offs of a proposed regulation. Such analyses should consider the reliability of the underlying science and the feasibility of various implementation options. Regulations should be based on transparent, verifiable, and well-vetted (i.e., broadly peer reviewed) data. Today, there are a number of rulemakings that move forward either without, or with inaccurate, CBAs. The regulatory process does not have an effective avenue for challenging CBAs. Concerns about CBAs include: data quality; failure to consider alternatives; failure to consider opportunity costs (jobs and investment); incorrect assumptions; and lack of transparency. CBAs should be subject to adequate review by stakeholders and OMB. For example, CBAs should not rely on inputs, like a social cost of carbon, unless they have gone through a robust public comment review and are consistent with federal guideline for developing CBAs.

Costs and benefits of regulatory actions should be presented in a standardized and easy to understand manner. CBAs can be complex and their results are reported out in an inconsistent format. This makes understanding

and comparing the impacts of a regulation difficult if not impossible. A standardized format for reporting the key inputs and outputs of a CBA (including assumptions, costs, and benefits) that is easily understood by the public will improve transparency and understanding of government actions.

Stakeholder input should be encouraged for regulatory actions. Enforcement actions and settlement agreements reached behind closed doors have been used to create new policies and regulatory actions in lieu of a comprehensive stakeholder engagement process. Excluding stakeholders from the regulatory process diminishes trust in government. Companies want to work with government towards well informed policies and provide data driven insights to improve regulatory actions. Increased engagement with business is needed to avoid unintended consequences. For example, in the Clean Power Plan, industry input helped EPA avoid penalizing efficient cogeneration plants.

Recommendations

Actively enforce the principles of Executive Orders 12866 and 13563 on federal agencies.

These Executive Orders outline the regulatory review process and require agencies to fully and objectively assess the costs and benefits of new regulations. The projected costs and benefits for regulations should be publicly reported in a standardized and straightforward format.

Direct OMB to mediate CBA differences between agencies and affected industries.

OMB should adopt a process by which stakeholders can challenge the CBA developed by an agency. Such a process would enhance the accuracy of CBAs and result in a better understanding of the environmental impacts and economic consequences of a proposed regulation.

Reform "sue and settle" practices. Agencies should give public notice when they learn of a potential lawsuit that could be settled by



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requiring a new rulemaking. Agencies should also be required to publish notices of proposed settlements in the Federal Register.

Reevaluate key existing and proposed regulations. Chevron is committed to working with government on all issues impacting our business. While there are numerous opportunities to improve regulations, we note the following:

Methane Emissions - Refocus methane regulations, particularly those that impact existing sources, to encourage voluntary approaches. New regulation should not be finalized or implemented until the Clean Power Plant litigation is decided as this could inform how the Clean Air Act may be applied for methane regulations.

Federal methane regulations will result in minimal reductions in methane emissions while increasing costs. For example, some of the prescriptive measures required by recent regulations could cost Chevron the equivalent of over \$50,000 per ton of carbon dioxide equivalent. Regulatory compliance costs are high because minimal methane emission reduction results from the new regulatory requirements. Many states already have methane regulations in place, making federal requirements duplicative and unnecessary. Additionally, industry is reducing methane emissions on its own and incentivized to do so. Natural gas, the product we sell, is mostly methane. Prescriptive regulatory requirements could hinder effective, risk-based, and voluntary industry efforts.

Renewable Fuels Standard (RFS) – Repeal or reform the RFS. Volumetric mandates for the RFS are waived each year demonstrating that the current RFS is flawed and unworkable.

Key challenges remain for successful implementation of the current RFS including: 1) insufficient quantities of available biofuels; 2)

realities of the E10 blendwall (the maximum amount most vehicles can safely take); and 3) vehicle and infrastructure limitations.

Unattainable biofuel targets could result in significant negative impacts on the U.S. economy and consumers, and have negligible, if any, environmental benefits.

National Ambient Air Quality Standards (NAAQS) for Ozone - Direct the EPA to withhold implementing more stringent NAAQS for Ozone until 85% of nonattainment areas from a previous standard are in attainment. The NAAQS review timeframe could be extended from 5 years to 10 years, allowing states an opportunity to come into compliance with one requirement before a new one is set.

In 2015, the EPA lowered the ozone standard, despite the fact that the previous standard has not yet been fully implemented. It is nearly impossible for multiple regions of the country to meet the new standard and a significant portion of the country may be designated to be in “nonattainment”. More than 700 counties will fall into new nonattainment areas by 2018. Nonattainment designation can stifle growth and industry investment in an area or state.



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U.S. Tax Policy

Summary

- Tax policy should enhance domestic investment in all forms of energy, including oil and natural gas, and the global competitiveness of U.S.-based companies.
- Tax reform should be fair and equitable and not disadvantage one sector of the economy, especially a sector such as oil and gas that is fundamental to our economy and national security.
- The oil and gas industry pays significant taxes, both domestic and international, and receives comparable tax treatment to other sectors.

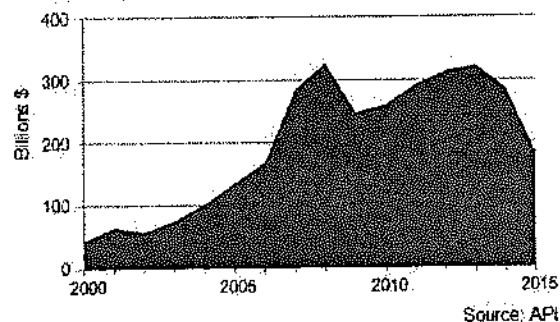
Energy markets are global. U.S. energy companies, including Chevron, have multiple opportunities to invest in projects both domestically and overseas. Tax policy, along with regulations and policies impacting access, play a key role in determining which projects companies decide to pursue. Chevron supports tax policy that enhances both domestic investment in all forms of energy as part of the overall energy mix and the global competitiveness of U.S. companies.

Discussion

U.S. tax policy impacts domestic energy investment. Comprehensive tax reform has been contemplated by both parties and may be ripe for discussion by the new Administration and Congress. Policy priorities for both Republicans and Democrats require funding that may be secured through changes to the U.S. tax code. Any changes should enhance companies' ability to succeed by avoiding policies that hinder energy resource development or undermine the global competitiveness of U.S. energy companies. Since 2000, the oil and gas industry has invested over \$3 trillion in the U.S. Between 2009 and 2014, our industry created nearly 170,000 jobs at a rate 5 times faster than the economy as a whole. Since 2014, oil and gas

jobs numbers decreased 18% to adjust to falling energy prices. From 2011 to 2015, the U.S. oil and gas industry paid an average of 37 cents in taxes out of every dollar earned, compared to about 26 cents for other industrial companies in the S&P500. Today our industry is adjusting to the significant decline in global commodity prices and tax payments are being impacted accordingly. During this downturn, and as commodity prices recover, it is particularly important that tax policies have a fair and predictable impact on the oil and gas sector.

Capital spending for U.S. projects



Targeted tax increases on the oil and gas industry are discriminatory and would harm the U.S. economy. Treating the oil and gas industry differently from other sectors is inequitable and ultimately penalizes all businesses and consumers. Repeal of longstanding energy-related provisions in the tax code would destroy high-quality domestic middle class jobs, decrease government revenues, diminish U.S. competitiveness, and be detrimental to national security. Punitive taxes will hurt a vital sector of the U.S. economy, dampen economic growth, and shift domestic oil and gas investments overseas. Expansion of the domestic oil and natural gas industry will provide a significant boost to the U.S. economy and enhance energy security.

The oil and gas sector receives tax treatment similar to those available to other sectors.

The tax treatment of the oil and gas industry is sometimes mischaracterized as subsidies. The



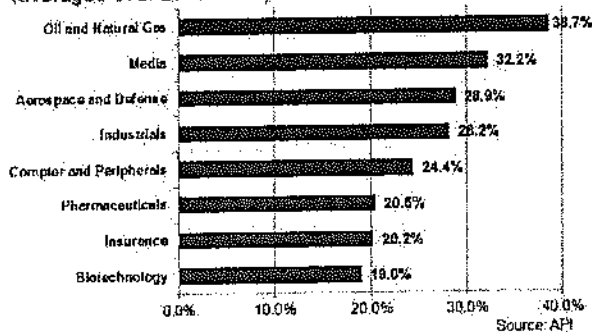
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tax deductions and provisions used by our industry are generally the same or mirror provisions available to virtually every other company in the U.S. In this regard, specific provisions include:

- Intangible Drilling Costs - ability to deduct intangible drilling costs. A basic principle of tax policy is to tax income after costs. Current tax policy allows the industry to deduct intangible drilling costs, just as other sectors deduct research expenses.
- Dual Capacity Taxpayers' Foreign Tax Credits - prevent double taxation on the income oil and gas companies earn overseas. These credits are similar to those received by virtually every other U.S. firm earning income abroad. They ensure our industry stays competitive with foreign energy companies.
- Domestic Manufacturer's Deduction ("Section 199") - encourages U.S. industries to maintain and create jobs at home. The program provides for a 9% deduction (6% for oil and gas).

Even with the current tax treatment, our industry has a demonstrated history of paying its fair share of taxes. From 2010 to 2015, our industry had an average effective tax rate of 38.7%, above the federal statutory rate of 35%.

Effective tax rates among industries (averaged over 2010-2015)



Comprehensive tax reform should provide non-discriminatory treatment among different energy sources and all sectors should be treated equitably. If done correctly,

comprehensive tax reform should encourage oil and gas companies to continue developing the energy resources the U.S. needs. Piecemeal tax reform efforts, such as international only or a patent box, are more likely to favor one industry over others. They would lessen the chance of achieving comprehensive tax reform that could lower the rate for all industries.

Recommendations

America needs a tax policy that enhances both domestic investment in all forms of energy and the global competitiveness of U.S.-based companies. Tax reform should be guided by the following principles:

- Reform should be comprehensive.
- All existing provisions of the tax code should be considered for reform.
- Taxes should be simplified.
- Reform should be equitable across all industries and sectors.
- To prevent double taxation of foreign-earned income, a fully-functioning foreign tax credit provision should be retained, unless it is replaced with a competitive territorial tax system.
- Tax reform should not discriminate among different energy sources or technologies or involve transfers from one energy sector to subsidize other components of the energy portfolio.



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Climate Change

Summary

- Climate policy should require global engagement, be balanced and measured, transparently communicate costs and benefits to consumers, and support continued research, innovation, and application of technology.
- Significant progress can be made in reducing emissions through the expanded use of energy efficiency and natural gas.
- Increased focus on technology and innovation through early phase research and development is needed to meet long term climate objectives.

Thoughtful decision making on this issue has never been more important. Governments should pursue policies that concurrently address national environment, economic, and security priorities. They should avoid policies that increase energy costs, particularly for those least able to afford it.

In the U.S., policy actions can be taken that are complementary to all of our priorities, such as: enabling natural gas, promoting energy efficiency, and investing in early stage research for step-change innovations.

Oil and gas development can support our long-term climate objectives. Industry innovation, such as the use of hydraulic fracturing combined with horizontal drilling, has resulted in the resurgence of domestic oil and gas production. This has led to U.S. energy abundance, lower energy costs, increased use of natural gas, and reduced U.S. GHG emissions to 1991 levels.

Chevron is taking practical and cost-effective actions to control our GHG emissions and support complementary government efforts. We are promoting energy efficiency, investing in natural gas, developing world-scale CO2 storage projects, and reducing flaring. We have improved our energy efficiency by over 34% since 1992.

Chevron has also invested in two of the world's largest CO2 injection projects: Gorgon in Australia and Quest in Canada. As a member of the World Bank sponsored Global Gas Flaring Reduction Partnership, we are working to minimize gas venting and flaring. We have reduced gas flaring by nearly 40% from 2011 through 2015. The CDP (formerly the Carbon Disclosure Project) consistently ranks Chevron among the best in disclosing information about climate change practices and GHG emissions. In 2015, the CDP gave Chevron a score of 99 out of 100.

Discussion

Government policy for climate change should adhere to the following principles: global engagement, a balanced and measured approach, transparency, and advancement and application of technology. Policymakers should consider these criteria when considering policy options.

Reducing GHG emissions is a global issue that requires global engagement and action.

Balanced and measured policies can ensure: 1) long-term economic, environmental, and energy security needs are met; 2) costs are allocated equitably, gradually, and predictably; and 3) actions consider both GHG mitigation and climate change adaptation.

The costs, risks, trade-offs and uncertainties associated with GHG reduction and climate change adaptation efforts and policies must be transparent and openly communicated to global consumers.

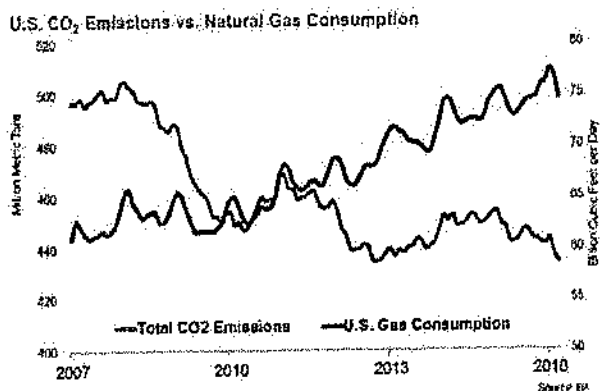
Continued research, innovation, and application of technology are essential to enable significant and cost-effective mitigations to climate change risks over the long term.

Increased production and use of natural gas supports climate change objectives. It also advances national economic and environmental priorities. Natural gas fueled electricity



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generation helped reduce U.S. energy related carbon dioxide emissions to 25 year lows, reaching 1991 levels during the first half of 2016. At the same time, the oil and gas industry produced natural gas more efficiently. From 1990 to 2015, U.S. natural gas sector methane emissions remained flat as production increased over 50%. Natural gas is a significant and increasing part of the national and global energy mix (29% and 23% respectively in 2015). Natural gas is essential for increased use of renewable electricity because it addresses intermittency challenges inherent to wind and solar. The U.S. has an opportunity to supply this lower carbon economic fuel to markets around the world to enable them to reap similar benefits.



Energy efficiency continues to be a cost-effective option. Since 2000, energy efficiency has helped the U.S. economy grow by nearly 30% while energy demand has remained flat. Improved energy efficiency, including in the transportation sector, can help meet climate change policy objectives. Increasing energy efficiency, such as through a 20% improvement in U.S. energy intensity, could save enough energy to meet the needs of California, New York and Florida combined. At Chevron, we have focused on, and successfully improved, our energy efficiency for decades and aim to sustain this trend going forward.

Increased research and development of lower carbon technologies should be encouraged.

All forms of energy will be needed to meet the world's needs, including renewables that are scalable and economic without subsidies. Chevron has invested in technologies including solar, advanced biofuels, and hydrogen. Our experience tells us that innovation is needed to identify and advance low carbon technologies. Increased government support for early phase research will accelerate innovation, which industry can then use for technology commercialization. Chevron has partnered with universities, federal labs, and companies to advance technologies for all forms of energy.

Recommendations
Pursue climate policies that require global engagement, are balanced and measured, transparently communicate costs and benefits to consumers, and support continued research, innovation, and application of technology. Climate policies should be assessed against these criteria.

Support cost effective and scalable options for reducing GHG emissions, including energy efficiency and increased production and use of natural gas. Significant progress can be made towards our climate objectives through established and proven pathways.

Promote technology neutral, early phase research and development in low-carbon technologies. Increased focus in this area can accelerate the innovation needed for breakthrough technologies that can be adopted globally, at scale, and without subsidies. The Administration should invest in technology innovation related to all forms of energy and allow markets to pick winner and losers.



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Security and Global Engagement

Summary

- Abundant domestic and global energy supplies support U.S. energy security.
- Affordable, reliable energy is essential for security because it promotes strong economies, sustained improvements in the quality of life, and poverty eradication.
- Maintaining energy security as the world's demand increases requires U.S. engagement and leadership abroad in calling for policies that promote efficient and open energy markets.

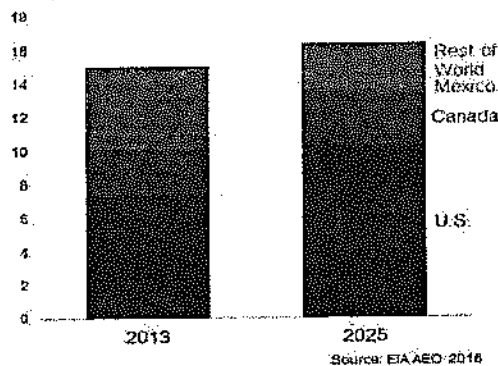
Over the past decade U.S. oil production has risen from around 5 million barrels per day to around 8.5 million barrels per day, and during the past two years domestic production surpassed imports for the first time since 1993. Natural gas production has grown nearly 50% since 2005 and is projected to soon exceed domestic consumption, making the U.S. a net gas exporter and reducing its emissions. Along with these clear benefits, this has enhanced national and global energy security. Federal policies are still catching up to an era of energy abundance and leveraging our energy resource to further improve security for the U.S. and our allies.

Discussion

Abundant reliable energy promotes national and global security. For energy to support a vibrant economy, it must be widely available, affordable and reliable—the basic principles of energy security. While the energy resurgence of the past decade has supported the U.S. economy and security, more is possible. Abundant affordable energy supplies make the global system more resilient to disruption, whether from geopolitical or natural causes, and bolsters both domestic and global economy and

security. The U.S. has the resources and technology to increase global energy production and supply to markets, effectively increasing and diversifying the global energy mix.

U.S. liquid fuel supply by source
(million barrels per day)



Affordable, reliable energy is essential for security. Global energy demand is expected to increase by around one third by 2040. Oil and gas will continue to make up about half of the global energy mix for the foreseeable future. Increasing demand will be driven by population growth and the continued development of emerging economies. Abundant oil and gas production will promote strong economies, sustained improvements in the quality of life, and poverty eradication. Diverse, reliable and affordable energy promotes stability and ultimately is in the U.S. national interest. We need to continue developing oil and gas as part of the overall energy mix.

Well-functioning global energy markets are essential. Today's energy markets are complex and global. Just as consuming economies seek secure reliable energy supplies, producing economies need reliable buyers. No modern economy is fully self-sufficient. Regional market disruptions can result in global price shocks and have far reaching geopolitical implications. Global security, economic growth, and U.S. national interests are all positively influenced by access to open, transparent, and well-functioning markets. Participation in global markets, including through trade agreements that provide



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a level playing field for U.S. companies, should be pursued.

U.S. leadership on energy requires continued global engagement. Key areas of focus should include: maintaining physical security of critical energy assets and supply routes; maintaining constructive dialogues with global energy partners, producers and consumers; and supporting rule of law and good governance through continuous engagement by U.S. agencies and embassies.

Recommendations

Encourage expansion of domestic and global energy production. Robust global energy production and ability to export U.S. oil and gas enhances our domestic and global energy security.

Encourage the free flow of energy from the U.S. to and from markets abroad. Support development of necessary domestic and cross-border infrastructure, including pipelines and terminals.

Engage on energy policy abroad with energy partners. Continued leadership by the Departments of State (regional and functional bureaus), Energy (International Affairs and Fossil Fuels), and Commerce on energy issues is vital to coordinating policy, crucial to maintaining sustained engagement with energy partners across the globe, and supporting the competitiveness of U.S. companies abroad. These agencies are well positioned to support U.S. economic interests, foreign policy priorities, and development objectives. They also serve an important role in reinforcing the longstanding U.S. commitment to transparency and good governance. U.S. leadership will be crucial in the coming years for sustaining these efforts. As such, an Assistant Secretary for the Bureau of Energy Resources should be created in the State Department to ensure energy diplomacy is fully integrated with our foreign policy.

Implement trade agreements, including the Trans-Pacific Partnership, with comprehensive investor-state dispute settlement mechanisms. High quality investment agreements support economic growth and a level playing field, the rule of law, and good governance. They provide predictability for long-term, large-scale investments abroad. Ensuring that trade agreements contain core protections and meaningful investor-state dispute settlement provisions, as outlined in the 2012 U.S. Model Bilateral Investment Treaty, are vital to protecting American companies abroad. They provide recourse against unfair treatment, support the rule of law, and provide a level playing field.

Engage with industry early when considering sanctions to avoid unintended consequences. During the past few decades, Congress and the executive branch have imposed economic sanctions on a variety of countries in the pursuit of foreign policy goals. Policy makers should engage with the private sector to avoid unintended consequences on energy supplies, markets and the economies of partner nations, while achieving foreign objectives.



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Creating Prosperity and Unlocking Progress

Summary

- The U.S. private sector is a major contributor to international development.
- Investments in global development promote U.S. security and prosperity.
- Public-private partnerships support U.S. and global development.

Public-private partnerships are essential for economic development. By leveraging the capabilities, best practices, and resources of both the private and public sectors to drive economic growth and job creation, we collectively contribute to the overall prosperity of communities where we operate.

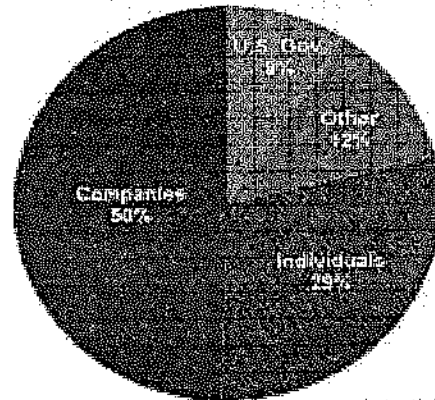
Affordable energy is a catalyst for economic growth and prosperity. Chevron provides energy responsibly and works with our partners to strengthen communities. Wherever we work, our Operational Excellence Management System provides a disciplined approach to working safely, protecting the environment, and operating reliably and efficiently. Our success is tied to the success of the communities where we work.

Discussion

U.S. companies support economic growth through their investments; by promoting best practices; and investing in public private-partnerships. Private companies provide 50% of financial flows to developing countries; 50 years ago it was only 30%. Chevron invests significant capital in major projects which require local goods and services. Our projects create jobs and generate revenue for local communities in the U.S. and abroad. In 2015, we invested more than \$54 billion in total goods and services around the world. Our work, however, extends beyond our direct business investments, supplying energy, and providing stimulus to local economies through jobs and the taxes we pay.

We make strategic social investments around the globe that focus on health, education, and economic development. Our public-private partnerships in these areas involves working closely with NGOs, development agencies, and communities to understand a community's needs and develop programs that effectively meet those requirements.

U.S. Investment In developing countries



Source: CSIS, 2010

Chevron continues to innovate in public-private partnerships at home and abroad.

From our first work with USAID in the early 2000s on the Angola Partnership Initiative, designed to help the country recover from decades of civil war, we remain committed to working with our partners and communities. Over the past 10 years, Chevron has invested over \$1.9 billion in partnerships and programs in the U.S. and around the world to develop skilled workers, improve access to healthcare, and boost local economies. We work with local governments, community leaders, NGOs, think tanks, and development agencies to create long-term programs that address critical needs across the globe. By leveraging the expertise and resources of our public-private partnerships, we help drive scalable and sustainable results.

As of 2016, Chevron has established and invested in world class public-private partnerships in many countries where we operate, including: United States, Kazakhstan,



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Angola, Nigeria, Bangladesh, Indonesia, and Thailand.

Education and economic development are key areas to drive development. Science, technology, engineering, and math education (STEM) is increasingly a driver of development. Few factors are more important to the success of our business and a country's competitiveness than individuals trained in STEM fields.

Chevron has a firm commitment to increasing and diversifying the long-term pool of STEM talent. Since 2013, we have invested over \$150 million in education in the U.S. and over \$300 million worldwide. In the U.S., we partner with leading organizations to prepare tomorrow's innovators for college and future careers. Our partnership with Project Lead the Way has brought project-based engineering curriculum to over 100 schools and has reached more than 100,000 students in 10 states including Pennsylvania, California, and Washington, D.C. The Appalachia Partnership Initiative is working to address education and workforce development in 27 counties in Pennsylvania, West Virginia and Ohio. Our partnerships with organizations such as Fab Foundation and Techbridge bring hands on STEM programs to students to arm them with skills needed to succeed in the jobs of the future. Abroad, our STEM partnerships in Thailand and Kazakhstan, as well as our enterprise and workforce development in Bangladesh and Nigeria aim to promote economic growth and development across these nations.

Improved health is a critical need in many nations that public private partnerships can help address. Since 2008, Chevron has partnered with The Global Fund, directing \$60 million to programs in Asia, West Africa, and South Africa. As The Global Fund's inaugural Corporate Champion and one of its largest single corporate partners, our support of The Global Fund contributed to 17 million lives saved. In

addition, since partnering with Pact in 2012, Chevron has provided \$5.3 million to support HIV testing and counseling for over 53,000 pregnant women in Africa.

Supporting global development helps countries, businesses and communities grow. Investing in public-private partnerships is an important component for long term viability of a nation and our business. Through decades of experience, we have learned that our business success is deeply linked to society's progress and prosperity. This is why everywhere we work, we strive to build lasting partnerships to create prosperity now and for decades to come.

Recommendations

Support public-private partnerships in the U.S. and abroad. Whether to attain the UN 2030 Agenda for Sustainable Development or to expand existing partnership efforts through USAID or the Department of State, public-private partnerships can support U.S. interests. The new Administration should continue to support these efforts.

Support U.S. companies in advancing energy projects overseas. Engagement with other nations to advance U.S. company energy projects promotes both local and U.S. interests. Improving lives and growing economies in developing countries improves U.S. economic partnerships and security.



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Executive Briefing Summary

Topic: Clean Air Scientific Advisory Committee (CASAC) Annual Membership
Date: September 14, 2017
Contacts: Aaron Yeow and Christopher Zarba

PURPOSE: Brief Dr. Richard Yamada on preliminary recommendations for CASAC membership and to ensure planned briefings for Agency leadership on CASAC membership are focused, responsive and effective.

ISSUE: The nomination period for the CASAC closed on July 27, 2017. The SAB Staff Office identified candidates that have confirmed interest to serve and have submitted biosketches and CVs. The List of Candidates was posted on the CASAC website (August 28, 2017) for a 21-day public comment period that ends on September 18, 2017.

On September 30, 2017, the second term is ending for the Chair of the CASAC, Dr. Ana Diez Roux, who also fulfills the statutory roles of physician and NAS member.

BACKGROUND:

- The CASAC is a statutory scientific and technical committee whose members are independent experts that do not represent the views of any organization or entity.
- The Clean Air Act specifies that CASAC consist of 7 members, including at least one member of the National Academy of Sciences (NAS), one physician, and one person representing State air pollution control agencies.
- 42 Candidates are on the List of Candidates (George Allen withdrew on 9/6/17).
 - 9 candidates are both physicians and members of the National Academies
 - 14 candidates are only physicians
 - 3 candidates are only members of the National Academies
 - 16 candidates that are neither physicians nor members of the National Academies and cannot fulfill the statutory requirements for CASAC membership.

NEXT STEPS:

- Review the detailed options and preliminary recommendations in the attached pages.
- After the public comment period closes, another briefing will be conducted to review the public comments and for the Administrator's decision on appointment(s).
- The SAB Staff Office will work with OGC and FACMD for the balance review and OES on invitation and thank you letters.
- After acceptance letters are received, the CASAC website will be updated with the new membership and the remaining candidates will be notified of the Administrator's decision.

OPTIONS: There are a number of options and sub options that can be considered. Three broad options are presented to help focus discussion and target preferred options. The three options are:

- 1) Extend current CASAC Chair
- 2) Appoint one new CASAC member
- 3) Appoint two new CASAC members

Option 1 - Extend Current CASAC Chair for One Year

- The 2-term, six-year CASAC membership limit is not codified and is at the discretion of the Administrator. In the past, SAB and CASAC members have been extended past the six-year limit.
- Pros:
 - Fulfillment of statutory membership roles are maintained
 - Does not require terminating a CASAC member's term early
 - Provides continuity of CASAC review work
 - Easy to defend decision
 - Allows greater flexibility to split the statutory roles next year, when more member terms expire
 - Dr. Diez Roux is an excellent CASAC Chair with direct experience and expertise in health effects of air criteria pollutants, epidemiology, environmental health, and public health
- Cons:
 - No new perspectives are added
 - One CASAC member would continue to fulfill two statutory roles. This can be mitigated next year, when more member terms expire.
 - May present an issue with staggering of terms - on September 30, 2018, 6 out of the 7 CASAC members would have first or second terms expiring. Can be somewhat mitigated by the use of 2-year and 3-year term appointments next year.

Option 2 – Appoint One New CASAC Member

Appointment of One New CASAC Member

- New member would need to fulfill the statutory roles of physician and member of National Academies
- Pros:
 - No deviation from past selection and appointment process
 - No early termination of existing CASAC member
 - Adds fresh perspectives to CASAC
- Cons:
 - A single member will continue to fulfill two statutory roles, but this can be mitigated by appointing an additional physician or member of the National Academies next year, when more member terms expire.
- Candidates were evaluated based on experience and expertise in health effects of air pollution, health effects of air criteria pollutants, epidemiology, environmental health, public health, national scientific peer review experience, and national scientific committee experience.

Recommendations

The most qualified candidates are:

Name	Organization	State	Expertise Required	Nominator	Academy
Boat, Thomas F.	Cincinnati Children's Hospital Medical Center	OH	Physician; Member of the National Academy of Sciences	DFO	NAM
Colditz, Graham A.	Washington University School of Medicine	MO	Physician; Member of the National Academy of Sciences	DFO	NAM
Lichtveld, Maureen	Tulane University	LA	Physician; Member of the National Academy of Sciences	DFO	NAM
Poliak, Martin R.	Harvard University Medical School	MA	Physician; Member of the National Academy of Sciences	DFO	NAS
Reingold, Arthur L.	University of California, Berkeley	CA	Physician; Member of the National Academy of Sciences	Dr. Jonathan Samet, University of Southern California	NAM

Appointment of CASAC Chair

- Option 1 – Appoint an existing CASAC member as CASAC Chair
 - Pros:
 - There would be little to no learning curve, allowing CASAC to operate with minimal disruption

- Experience with FACA rules, how CASAC operates, and portfolio of ongoing CASAC work
 - **Recommendation:** Dr. Elizabeth (Lianne) Sheppard, University of Washington
 - Dr. Sheppard is an excellent, productive member, with demonstrated leadership and facilitation skills in chairing CASAC panels.
 - **Alternate:** Dr. Ivan Fernandez, University of Maine
 - Dr. Fernandez has experience serving on SAB panels and chairing the CASAC Secondary NAAQS Review Panel for Oxides of Nitrogen and Sulfur.
 - Length of Chair appointment is typically 2 years, but is at the discretion of the Administrator.
 - Both Dr. Sheppard and Dr. Fernandez have their first 3-year terms ending on September 30, 2018.
- Option 2 – Appoint the new CASAC member (selected above) to serve as CASAC Chair
 - Cons: There may be a learning curve and it will take time to become familiar with FACA rules, how CASAC operates, and ongoing CASAC work.

Option 3 - Appoint Two New CASAC Members

Appointment of Two New CASAC Members

- Appoint one physician and appoint one member of the National Academies
- CASAC is limited to 7 members and only one member's term is expiring. Appointing 2 new members would require terminating an existing CASAC member's term early.
- Pros:
 - Would separate the statutorily-required roles of physician and member of the National Academies into two CASAC members
- Cons:
 - Negative reaction from the media and public could be severe. Ending a CASAC member's term early could be perceived as firing that member.
 - Deviates from usual process. This option is different from not renewing a member for a second three-year term.
- Candidates were evaluated based on experience and expertise in health effects of air pollution, health effects of air criteria pollutants, epidemiology, environmental health, public health, national scientific peer review experience, and national scientific committee experience.

Recommendations

The most qualified candidates are:

Physicians with direct experience in health effects of criteria pollutants				
Name	Organization	State	Expertise Required	Nominator
Balmes, John R.	University of California, San Francisco	CA	Physician	Gary Ewart, American Thoracic Society; Dr. Joel Kaufman, University of Washington
Bascom, Rebecca	Pennsylvania State University	PA	Physician	Gary Ewart, American Thoracic Society
Frampton, Mark	University of Rochester	NY	Physician	Dr. Richard Yamada, USEPA
Garshick, Eric	Veterans Administration Boston Health Care System	MA	Physician	Dr. Michael McGinnis, National Academy of Medicine
Kipen, Howard	Rutgers University School of Public Health	NJ	Physician	Gary Ewart, American Thoracic Society
McConnell, Rob	University of Southern California	CA	Physician	Dr. Joel Kaufman, University of Washington

Option 4 – Appoint All New Members to CASAC

- The Administrator has the option of appointing all new members to CASAC.
- This would require ending 6 CASAC members' terms early.
- There may be severe negative reaction from the media and public. Ending a CASAC member's term early could be perceived as firing that member.
- Appointing all new members would provide no continuity in service, lost productivity in training new members, getting new members familiar with FACA rules, how CASAC operates, and ongoing CASAC work. This would create significant delays in CASAC review work with the potential for the agency to miss court-ordered deadlines.
- This option would require a new solicitation for nominations in the Federal Register Notice because the FRN published on June 27, 2017, solicited only for physicians and members of the National Academy of Sciences.
 - The new FRN would need to solicit for all three required statutory roles -- physician, member of the National Academy of Sciences, and a person representing state air pollution control agencies.
 - The new FRN would also need to solicit for all of the scientific disciplines needed for CASAC to create a sufficient pool of qualified experts to fully constitute CASAC.
- A new FRN would delay the appointment process by 4 months.
 - This would lead to a delay in finalizing the CASAC Sulfur Oxides review which in turn may delay the agency's Sulfur Oxides Primary NAAQS review, which is under a lawsuit and proposed consent decree.
- Not publishing a new FRN may generate media and public backlash for not conducting an open public solicitation for all statutory roles and scientific disciplines needed for CASAC.

Executive Briefing Summary

Topic: Clean Air Scientific Advisory Committee (CASAC) Annual Membership
Date: September 20, 2017
Contacts: Aaron Yeow and Christopher Zarba

PURPOSE: Brief Dr. Richard Yamada on further information pertaining to Options 3 and 4 from the September 14, 2017 revised briefing.

ISSUE: On September 30, 2017, the second term is ending for the Chair of the CASAC, Dr. Ana Diez Roux, who also fulfills the statutory roles of physician and NAS member. The nomination period for the CASAC closed on July 27, 2017. The List of Candidates was posted on the CASAC website (August 28, 2017) for a 21-day public comment period that ended on September 18, 2017.

BACKGROUND:

- The CASAC is a statutory scientific and technical committee whose members are independent experts that do not represent the views of any organization or entity.
- The Clean Air Act specifies that CASAC consist of 7 members, including at least one member of the National Academy of Sciences (NAS), one physician, and one person representing State air pollution control agencies.
- During and subsequent to the September 14, 2017 briefing, four options were identified: 1) Extend current CASAC Chair; 2) Appoint one new CASAC member (including SABSO recommendations of highly qualified candidates); 3) Appoint two new CASAC members (including SABSO recommendations of highly qualified candidates); and 4) Appoint all new CASAC members.
- On September 18, 2017, Dr. Yamada provided the following candidates for options 3 and 4 and requested further information:
 - Option 3 – Appoint 2 new CASAC members
 - Dr. Larry Wolk (physician) / Dr. Mark Frampton (physician)
 - Dr. Tony Cox (NAE)
 - Option 4 – Appoint all new CASAC members
 - Dr. James Boylan (Georgia Department of Natural Resources)
 - Dr. Tonx Cox (NAE)
 - Dr. Sabine Lange (Texas Commission of Environmental Quality)
 - Dr. Steven Packham (Utah Department of Environmental Quality)
 - Dr. Larry Wolk (physician and Colorado Department of Public Health and Environment)
 - Dr. Robert Phalen
 - Dr. Mark Frampton (physician) / Dr. Stanley Young / Dr. Jeffrey Lewis

Summary of Public Comments

- Public Comment period ended September 18, 2017
- Received 46 public comments
 - Majority were letter/emails supporting individual candidates
- Possible financial conflicts of interest:
 - Drs. Cox, Waldman, Young may have COI (2 University of Utah professors)
 - Dr. Lewis may have COI (Environmental Protection Network)
 - Drs. Balmes, Diez Roux, Frampton, McConnell, Ritz, Russell, Thurston, Zeger, Mr. Allen and Mr. Croes may have COI due to EPA grants (junkscience mass comments)
- Possible appearance of a lack of impartiality:
 - Drs. Cox, Hayworth, Henry, Lewis, Waldman, Young (Environmental Integrity Project)
- Lack of scientific expertise:
 - Drs. Cox, Waldman, Young lack key scientific credentials (2 University of Utah professor)
 - Drs. Waldman and Young do not have deep expertise for CASAC – do not have the breadth and depth of expertise compared to the other candidates (Environmental Protection Network)
- List of Candidates include candidates who are not physicians and NAS members, contrary to FRN solicitation:
 - Creates confusion for public, makes it hard to provide comments on qualifications not stated in the FRN [Northeast States for Coordinated Air Use Management (NESCAUM)]
 - If appointments of candidates not meeting qualifications in FRN are made, membership process will be arbitrary and deeply flawed. Process should be transparent and align with announced requirements. (NESCAUM)
 - FRN is clear on soliciting physicians and NAS members. If other candidates are desired, new FRN should be published. (Chris Frey, NCSU)
 - Not a public comment, but asked whether the qualifications in FRN were absolute requirements (American Chemistry Society)
 - Not a public comment, but the American Petroleum Institute (API) called to ask why there were candidates on the List of Candidates who were not physicians and NAS members.
- CASAC should have expertise to provide advice on any adverse economic or energy effects related to NAAQS implementation
 - NAAQS Implementation Coalition
 - State air agency experts have the expertise to provide this kind of advice [Association of Air Pollution Control Agencies (AAPCA)]
- More state representation and geographic diversity
 - Supports appointment of state air agency experts on List of Candidates (AAPCA)

Option 3 - Appoint Two New CASAC Members

Appointment of Two New CASAC Members

- Appointment of one physician and one member of the National Academies would fit within the scope of the FRN solicitation.
- Physician:
 - Dr. Mark Frampton / Dr. Larry Wolk
 - **Dr. Mark Frampton (University of Rochester)**
 - Expertise and experience in respiratory medicine, inhalation toxicology, health effects of air pollution and air criteria pollutants
 - Experience serving on national committees including HEI, NIH, EPA
 - **Dr. Larry Wolk (Colorado Department of Public Health and Environment)**
 - Experience in pediatrics, adolescent medicine
 - No direct experience in health effects of air pollution, epidemiology, toxicology
 - No direct experience serving on national scientific committees
- Member of the National Academies:
 - Dr. Tony Cox (National Academy of Engineering)
 - Expertise and experience in quantitative risk assessment, statistical analysis of epidemiological data
 - Experience serving on national scientific committees, including NAS, NRC, IOM, EPA SAB panels
 - Possible issue with conflict of interest or appearance of a lack of impartiality:
 - Consulting clients have included: American Chemistry Council, American Petroleum Institute, ExxonMobil, National Mining Association
 - Congressional testimony on health effects of air pollutants; health effects of ozone
 - Public comments made on ozone and PM NAAQS on behalf of Engine Manufacturer's Association
- Between the two physicians suggested above, Dr. Frampton has more direct experience addressing the issues that CASAC will provide advice on.
- Both Dr. Wolk and Dr. Cox are from the state of Colorado. Appointment of two members from the same state would decrease geographic diversity.

Appointment of CASAC Chair

- From the suggested candidates above, Dr. Mark Frampton would be better suited to serve as CASAC Chair based on breadth of air pollution expertise and experience and current membership on the CASAC PM panel.

Termination of Existing CASAC Member

- Selection of 2 new CASAC members would require termination of an existing CASAC member. CASAC members with 2nd terms ending September 30, 2018:
 - Dr. Jack Harkema, Michigan State University
 - Dr. Ronald Wyzga, Electric Power Research Institute

Option 4 – Appoint All New Members to CASAC

Appointment of all New CASAC Members from the List of Candidates

- Not publishing a new FRN may generate media and public backlash for not conducting an open public solicitation for all statutory roles and scientific disciplines needed for CASAC.
- Suggested candidates as proposed may not reflect a balance of scientific disciplines (several overlapping disciplines and lack of ecology/welfare expertise needed for secondary NAAQS)
- Both Dr. Wolk and Dr. Cox are from the state of Colorado. Appointment of two members from the same state would decrease geographic diversity.
 - Dr. James Boylan (Georgia Department of Natural Resources)
 - Expertise and experience in air quality modeling and monitoring, particularly criteria pollutants
 - Experience serving on national peer review committees including NACAA, EPA, and CASAC SO_x panel.
 - Dr. Tony Cox (National Academy of Engineering)
 - Expertise and experience in quantitative risk assessment, statistical analysis of epidemiological data
 - Experience serving on national scientific committees, including NAS, NRC, IOM, EPA SAB panels
 - Possible issue with conflict of issue or appearance of a lack of impartiality:
 - Consulting clients have included: American Chemistry Council, American Petroleum Institute, ExxonMobil, National Mining Association
 - Congressional testimony on health effects of air pollutants; health effects of ozone
 - Public comments made on ozone and PM NAAQS on behalf of Engine Manufacturer's Association
 - Dr. Sabine Lange (Texas Commission on Environmental Quality)
 - Experience and expertise in toxicology
 - No direct experience serving on national scientific committees
 - Possible issue with an appearance of a lack of impartiality
 - Publications and presentations on NAAQS for criteria pollutants
 - TCEQ has well-established views and positions on various NAAQS and has presented public comments at CASAC meetings
 - Dr. Steven Packham (Utah Department of Environmental Quality)
 - Experience and expertise in toxicology
 - Experience on national scientific committees
 - Dr. Larry Wolk (physician and Colorado Department of Public Health and Environment)
 - Experience in pediatrics, adolescent medicine