

ORAL ARGUMENT NOT YET SCHEDULED

No. 20-1145

Consolidated with Nos. 20-1167, 20-1168, 20-1169, 20-1173, 20-1174, 20-1176,
20-1177, and 20-1230

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

COMPETITIVE ENTERPRISE INSTITUTE, et al.,
Petitioners,

v.

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION, et
al., *Respondents.*

**PROOF BRIEF OF *AMICUS CURIAE* PROFESSOR JASON BORDOFF
IN SUPPORT OF PETITIONERS**

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**CERTIFICATE AS TO PARTIES, RULINGS UNDER REVIEW, AND
RELATED CASES**

A. Certificate as to Parties

Pursuant to D.C. Circuit Local Rule 28 (a)(1)(A), Professor Jason Bordoff (proposed Amicus) submits that all parties and intervenors appearing in this Court are listed in the Initial Brief of the State and Local Government Petitioners 7-11. Amicus understands that one or more entities may also seek to participate as amicus curiae. To date, no individuals or entities have sought leave to participate as amicus curiae. On December 21, 2020, all parties consented to the filing of this amicus briefs provided that amicus complies with applicable court rules. ECF No. 1876643.

B. Certificate as to Ruling Under Review

Certain of these petitions challenge an action of the U.S. Environmental Protection Agency published at 83 Fed. Reg. 16,077 (Apr. 13, 2018). All petitions challenge actions of the U.S. Environmental Protection Agency and the National Highway Traffic Safety Administration jointly published as The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks, 85 Fed. Reg. 24,174 (April 30, 2020).

C. Certificate as to Related Cases

The undersigned is not aware of any related cases within the meaning of Circuit Rule 28(a)(1)(C) that have not been consolidated with these petitions.

Respectfully Submitted,

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RULE 26.1 CORPORATE DISCLOSURE STATEMENT

Pursuant to Federal Rule of Appellate Procedure 26.1, Professor Bordoff is an individual and not a corporation that issues stock to the public.

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RULE 29(a)(4)(E) STATEMENTS

Pursuant to Federal Rule of Appellate Procedure 29(a)(4)(E), I certify that:

- (i) Counsel for Amici authored this brief in whole;
- (ii) No party or party's counsel contributed money that was intended to fund the preparation or submission of this brief; and that
- (iii) No other person contributed money that was intended to fund the preparation or submission of this brief

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GLOSSARY

CAFE	Corporate Average Fuel Economy
EPCA	Energy Policy and Conservation Act of 1975
NHTSA	National Highway Traffic Safety Administration
JA	Joint Appendix
SAFE	The Safer Affordable Fuel-Efficient Vehicles Rule

STATEMENT OF IDENTITY

Professor Jason Bordoff is an expert on the intersection of economics, energy, and the environment. He is a Professor of Professional Practice at Columbia University's School of International and Public Affairs (SIPA) and Founding Director of Columbia University SIPA's Center on Global Energy Policy. Prior to joining Columbia University, Professor Bordoff held several positions in the White House, including Special Assistant to the President and Senior Director for Energy and Climate Change on the Staff of the National Security Council and the Associate Director for Energy and Climate Change on the Council on Environmental Quality. Professor Bordoff also spent four years as the Policy Director for the Hamilton Project, an economic policy initiative of the Brookings Institution. Professor Bordoff has written and spoken extensively on energy policy, the environment, and climate change throughout his career. His curriculum vitae is attached as Exhibit A.

INTEREST IN CASE

Professor Bordoff is an expert in economics, energy, and the environment, and submits that conserving oil is critical to national security. Professor Bordoff will use his expertise to assist the court in understanding the significant need for the United States to conserve oil and that NHTSA's conclusion to the contrary is incorrect. Professor Bordoff timely submitted comments to NHTSA as part of the administrative record below. EPA-HQ-OAR-2018-0283_1 [JA ____].

NHTSA's failure to adequately consider his comments spurred Professor Bordoff to participate as an amicus curiae. The United States has an interest in reducing its reliance on oil. See *infra* at p. 18. NHTSA's conclusion that there is no longer a need to conserve oil violates the law and threatens U.S. interests.

SOURCE OF AUTHORITY TO FILE

Pursuant to D.C Circuit Rule 29(b), undersigned counsel represents that all parties have consented to filing this brief and further certifies that a separate brief is necessary to provide the Court with perspective on and expertise regarding the comprehensive energy policy of the United States, which amicus curiae represents. In addition, the relationship between U.S. reliance on oil and American energy security is uniquely relevant to the agency action at issue. Accordingly, amicus curiae, through counsel, certifies that filing a joint brief would not be practicable.

SUMMARY OF ARGUMENT

With its new CAFE standards, NHTSA has decreased its fuel economy standards from what had governed through to the year 2020. NHTSA primarily rationalized this relaxing of standards by arguing that the United States is no longer a net importer of oil, and that therefore there is no longer a great need for the United States to conserve oil. The facts in the record disproved this argument on two main fronts: (1) increased domestic shale production will not adequately insulate domestic consumers from global oil supply disruptions, and (2) there are several ongoing global risks to oil supply that could harm domestic consumers and the domestic economy as a whole. While NHTSA conceded all of these points in its final rulemaking, it continued to insist on its original rationale without any additional evidence. By accepting the continued risks to the U.S. economy presented on the record, NHTSA acted arbitrarily and capriciously in adhering to its planned relaxing of CAFE standards without additional evidence.

BACKGROUND

In 2018, NHTSA proposed CAFE standards for the 2021-26 period that represented a decrease from the previous standards. *See generally* 83 Fed. Reg. 42,986 (Aug. 24, 2018). One of NHTSA's key justifications for this deregulation was that the "shale revolution" in the U.S. had reduced American reliance on oil imports and therefore exposed the U.S. market to fewer risks from supply disruptions abroad. *Id.* at 43,212. However, commenters firmly rebuked this justification by demonstrating that the U.S. would remain tied to the global oil market, and therefore still vulnerable to supply disruptions abroad.

When it adopted the SAFE Rule NHTSA explicitly agreed with the following nine material issues detailed below. All of these concessions, taken together, demonstrate NHTSA's shared understanding with commenters that the U.S. economy faces several ongoing risks from its involvement in a global oil market, regardless of how much oil the U.S. imports.

1. First, and perhaps most significant, "NHTSA agree[d] with commenters that energy conservation remains important, and that changed conditions, even significantly changed conditions, do not obviate NHTSA's obligation to set maximum feasible CAFE standards as directed by Congress." 85 Fed. Reg. 24,174 at 25,168 (April 30, 2020). *Compare with* Comments of Professor

Jason Bordoff, EPA-HQ-OAR-2018-0283_2 [JA____] (citing 83 Fed. Reg. at 43,210-16, 43,226).

2. “NHTSA agree[d] with commenters that consumer costs for fuel are relevant to the need of the U.S. to conserve energy.” 85 Fed. Reg. at 25,141. *Compare with* EPA-HQ-OAR-2018-0283_2 [JA____] (citing 83 Fed. Reg., *supra*).
3. Because the United States is still part of the global market, domestic consumers may still face price shocks from supply disruptions abroad. 85 Fed. Reg. at 25,150. *Compare with* EPA-HQ-OAR-2018-0283_3 [JA ____] (citing Jason Bordoff, *Don’t Get Used to Cheap Gas*, WALL. ST. J. (Sept. 18, 2015), <http://blogs.wsj.com/experts/2015/09/18/dont-get-used-to-cheap-gas/>).
4. There are several ongoing geopolitical risks to global oil supply, which could affect prices paid by domestic consumers. 85 Fed. Reg. at 25,150. *Compare with* EPA-HQ-OAR-2018-0283_3 [JA ____] (BOB McNALLY, CRUDE VOLATILITY: THE HISTORY AND THE FUTURE OF BOOM-BUST OIL PRICES (2017)).
5. NHTSA “concede[d] that shale resources may not be able to stabilize oil markets fully to prevent a price increase associated with a large supply disruption elsewhere in the world.” 85 Fed. Reg. at 24,726. *Compare with* EPA-HQ-OAR-2018-0283_9 [JA____] (citing Ed Crooks, *The Week in*

Energy: A Lasting Oil Alliance, FINANCIAL TIMES (Jan. 26, 2018),

<https://www.ft.com/content/5dbca0c8-02b3-11e8-9650-9c0ad2d7c5b5>).

6. NHTSA “believe[d] that the United States lacks the power to (significantly) control the global oil price and as a consequence remains vulnerable to the effects of oil price spikes, regardless of our own oil output.” 85 Fed. Reg. at 24,726. *Compare with* EPA-HQ-OAR-2018-0283_3 [JA ____] (citing MCNALLY, *supra*).
7. The United States, despite decreased oil imports, is still a part of the global market for oil. 85 Fed. Reg. at 25,150. *Compare with* EPA-HQ-OAR-2018-0283_6 [JA ____] (citing JOHN DEUTCH & JAMES R. SCHLESINGER, NATIONAL SECURITY CONSEQUENCES OF U.S. OIL DEPENDENCY: REPORT OF AN INDEPENDENT TASK FORCE 4 (Council on Foreign Relations Press) (2006), https://cdn.cfr.org/sites/default/files/report_pdf/0876093659.pdf).
8. “NHTSA also agree[d] that future fuel prices are uncertain, and that shale oil development in the U.S. is (1) still proceeding and subject to uncertainty, (2) very different from traditional sources like Saudi Arabia, and (3) not enough, by itself, to preclude any possibility of major swings in future global oil prices.” 85 Fed. Reg. at 25,150. *Compare with* EPA-HQ-OAR-2018-0283_9 [JA ____] (citing Crooks *supra*).

9. “Without the supply of U.S. oil in the global market, NHTSA agree[d] that it is foreseeable that conditions could revert somewhat to how global oil market conditions were before the ramp-up in U.S. supply—*i.e.*, that the global market as a whole could be somewhat less stable and thus fuel prices could be somewhat more prone to change unexpectedly and for longer periods.” 85 Fed. Reg. at 25,170. *Compare with* EPA-HQ-OAR-2018-0283_3 [JA ____] (citing MCNALLY, *supra*).

All of the above facts demonstrate NHTSA’s agreement with commenters that because the U.S. oil market is not and will not become insulated from global supply disruptions, there is an ongoing risk to the U.S. economy and consumers from supply disruptions in the global oil market. However, while NHTSA expressly agreed with the aforementioned facts on the record, its conclusions differed from those presented by commenters such as Professor Bordoff in a manner that is arbitrary and capricious. *See id.* at 25,141, 25,150.

Commenters, Professor Bordoff included, concluded that “the most effective policies to protect consumers from ineluctable oil price spikes are those that reduce our oil consumption in the first place.” EPA-HQ-OAR-2018-0283_11 [JA ____]. Commenters clarified that while the U.S. could never fully insulate itself from global price shocks, reducing oil consumption would “mitigate the adverse impact of future oil price increases on American drivers.” *Id.* In tandem with this

reduction of oil consumption, Professor Bordoff proposed that our energy policy emphasize investments in “R&D in alternative transportation fuels and technologies.” EPA-HQ-OAR-2018-0283_11 [JA____] Professor Bordoff explained that besides reducing the impact of transportation on climate change, reducing the oil intensity of the U.S. economy will make the economy more secure against inherently volatile oil markets. *Id.*

NHTSA, on the other hand, diverged significantly from this conclusion. While conceding the long list of facts above, NHTSA insisted that it continued to “believe” production of shale oil could drive down domestic oil costs and insulate the U.S. economy from “negative price effects.” 85 Fed. Reg. at 25,141, 25,150. Based on these beliefs - and apparently these beliefs alone - NHTSA decided that its statutory obligation to promulgate the maximum feasible CAFE standards based in part on the need of the U.S. to conserve energy could be fulfilled by relaxing those standards below what had already been required through to 2021.

ARGUMENT

I. THE ENERGY POLICY AND CONSERVATION ACT REQUIRES NHTSA TO PROMOTE THE OVERARCHING GOAL OF ENERGY CONSERVATION.

Congress enacted the Energy Policy and Conservation Act (EPCA) in 1975 following years of rising oil prices that were a result of depressed domestic production and limited foreign supply. *See, e.g.*, H.R. REP NO. 94-340, pt. D, at 51-52 (1975). The Act provides that NHTSA “shall” set the “maximum feasible” CAFE standards. 42 U.S.C. § 32902(a). Congress has identified four factors that NHTSA must evaluate in determining the maximum feasible standards, including the need of the U.S. to conserve energy. 42 U.S.C. § 32902(f).

This Court has held and other courts have reaffirmed that the need of the U.S. to conserve energy is most important to the statutory scheme. This Court has long recognized that “Congress intended energy conservation to be a long-term effort that would continue through temporary improvements in energy availability.” *Center for Auto Safety v. NHTSA*, 793 F.2d 1322, 1340 (D.C. Cir. 1986). The Ninth Circuit has further held that NHTSA must resolve its balancing of the four statutory factors in favor of the need of the U.S. to conserve energy. *Center for Biological Diversity v. NHTSA*, 538 F.3d 1172, 1195 (9th Cir. 2008). NHTSA has consistently identified four sub-factors it uses to evaluate the need of the U.S. to conserve energy. These sub-factors include the consumer cost and

foreign policy implications of our need for large quantities of oil. *See* 42 Fed. Reg. 33,255, 33,534 (June 30, 1977). NHTSA's response and the record focused on these two sub-factors. *See generally infra* Sections II, III. The record explained that the cost to consumers will be dictated by the U.S.'s continued participation in the global oil market despite decreased imports, and that increased domestic production of shale oil would not change that fact. EPA-HQ-OAR-2018-0283_6-7 [JA ___ - ___]; *See* DEUTCH & SCHLESINGER *supra* ("While oil prices may retreat from their current high levels, one should not expect the price of oil to return, on a sustained basis, to the low levels seen in the late 1990s. In fact, if more costly domestic supply is used to substitute for imported oil, then prices will not moderate."). For these reasons, the best way to protect consumers and the economic interests of the U.S. as a whole is to reduce how much oil the U.S. consumes. EPA-HQ-OAR-2018-0283_11 [JA ____]. NHTSA conceded all factual analysis raised on the record, but without additional evidence concluded that the two sub-factors favored less stringent CAFE standards. Thus, NHTSA's conclusion was arbitrary and capricious and contrary to EPCA's goal of energy conservation. *See, e.g., Motor Vehicles Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto Ins. Co.*, 463 U.S. 29, 43 (1983) (explaining that an agency acts arbitrarily when it "offer[s] an explanation for its decision that runs counter to the evidence before [it].").

II. NHTSA AGREED THAT CAFE STANDARDS BENEFIT CONSUMERS AND THAT U.S. OIL PRODUCTION DOES NOT INSULATE CONSUMERS FROM HIGH OIL PRICES.

The first sub-factor which NHTSA analyzed when evaluating the need to conserve energy is “the consumer cost . . . of our need for large quantities of petroleum, especially imported petroleum.” 85 Fed. Reg. at 24,214. NHTSA acknowledged that “consumers benefit from vehicles that need less fuel to perform the same amount of work,” and that fuel prices for consumers are a “critical input into the economic analysis of potential CAFE standards.” *Id.* Thus, increasing CAFE standards benefits consumers by reducing their spending per gallon on fuel.

While CAFE standards may protect consumers to some extent, NHTSA cannot insulate them from changes in global oil prices as long as the U.S. is part of a global oil market. NHTSA conceded that “the United States lacks the power (significantly) to control the global oil price,” and that United States consumers are therefore vulnerable to price shocks irrespective of U.S. oil production. 85 Fed. Reg. at 24,726. NHTSA explicitly acknowledged the oil market’s globally integrated nature, and the fact that supply disruptions anywhere impact prices everywhere. *Id.* NHTSA further agreed that domestic oil prices fluctuate to the same degree irrespective of the balance between U.S. imports and exports. 85 Fed. Reg. at 24,726. Finally, NHTSA agreed that U.S. gas prices are especially fluctuant compared to prices in other OECD countries, because of the low level of

fuel taxation in the U.S. *Id.* These concessions only underscore the importance of strong CAFE standards, since increased fuel economy standards reduce the oil intensity of the economy and consequently reduce U.S. exposure to price fluctuations.

A. The Continued Exposure of Consumer Prices to Global Supply Shocks Militates Against Weakening CAFE Standards.

Because of the integrated nature of the global market, the facts on record demonstrated that the best way to reduce exposure to volatile oil markets is to reduce the oil intensity of the U.S. economy, such as by retaining existing CAFE standards. EPA-HQ-OAR-2018-0283_12 [JA ____]. For example, U.S. prices fluctuated to the same extent in 2005, when the U.S. imported about 60 percent of its oil consumption, as in 2015, when it imported about 24 percent. EPA-HQ-OAR-2018-0283_7 [JA ____]; Jason Bordoff, *America's Energy Policy: From Independence to Interdependence*, CENTER FOR INTERNATIONAL RELATIONS AND SUSTAINABLE DEVELOPMENT, <https://www.cirsd.org/en/horizons/horizons-autumn-2016--issue-no-8/americas-energy-policy-from-independence-to-interdependence>.

B. NHTSA Agreed That Increases in U.S. Shale Oil Production Do Not Insulate Consumers from Oil Price Shocks

NHTSA conceded that the dynamics of a global oil market, to wit, that oil prices are globally determined such that “increasing U.S. production does not prevent price shocks that occur due to non-US events or circumstances.” 85 Fed.

Reg. at 25,140-41. Thus, no increase in the availability of shale oil can protect consumers from changes in global oil prices. NHTSA “concede[d] that shale resources may not be able to stabilize oil markets fully” to prevent price increases caused by global supply disruptions.” *Id.* at 24,726. NHTSA admitted, citing Professor Bordoff specifically, that shale oil development is still subject to uncertainty and that it “is not, by itself, enough “to preclude any possibility of major price swings in future global oil prices.” *Id.* at 25,141.

In spite of these contrary admissions, NHTSA’s recommendation in the Final Rule was based in part on the fact that NHTSA “continues to believe” that the development of U.S. shale oil “may reduce the negative price effects of global price swings.” *Id.* In one breath, NHTSA conceded that U.S. shale production could not prevent major global price shocks, and in another insisted that increased shale production justifies loosening existing CAFE standards. NHTSA’s own statements render any argument based on increased U.S. shale production arbitrary and capricious.

III. NHTSA’S ANALYSIS OF THE FOREIGN POLICY IMPLICATIONS OF ITS RULES ACCEPTED ALL OF PROFESSOR BORDOFF’S FACTUAL ANALYSIS, BUT DISREGARDED HIS CONCLUSION WITHOUT ADDITIONAL EVIDENCE

A. NHTSA Conceded that There Are Significant Geopolitical Risks to Domestic Oil Prices

The second sub-factor that NHTSA analyzed while evaluating the need of the United States to conserve oil was "the risk of disruptions to the U.S. economy caused by sudden increases in the global price of oil and its resulting impact of fuel prices faced by U.S. consumers." 85 Fed. Reg. at 25,149. NHTSA acknowledged that U.S. participation in the global oil market can force a number of external pressures onto the U.S. economy, including *inter alia* disruptions to the domestic economy from oil price disruptions abroad. *Id.*

Having already conceded that the U.S. oil market is not and will not become insulated from global price shocks caused by supply disruptions, *see* Section III, *supra*, NHTSA acknowledged a number of past and ongoing geopolitical risks to oil supplies. Specifically, NHTSA conceded five geopolitical phenomena that would continue to affect the global oil supply and potentially cause price fluctuations in the U.S.: (1) decreased Iranian oil production as a result of the U.S.’s withdrawal from the Iran Nuclear Deal and subsequent reimposition of sanctions, (2) significantly decreased Libyan production as a result of its civil war, (3) a sharp drop in Venezuelan production following its economic collapse, (4)

short-term production outages in even more developed regions, such as Canada, Brazil, and the North Sea, and (5) sharp price *decreases* from a number of geopolitical events including temporary production increases among OPEC countries. 85 Fed. Reg. at 25,150.

The aforementioned five geopolitical factors resulted in significant price fluctuations despite the ramp-up in domestic shale production. EPA-HQ-OAR-2018-0283_3 [JA ____]. There are a number of other geopolitical risks to global oil supplies that the record raised, and while NHTSA did not expressly agree to these observations, it did not dispute them either. For example, the record pointed out that during the diplomatic dispute between the U.S. and Saudi Arabia over the killing of journalist Jamal Khashoggi, Saudi Arabia issued a statement warning that it could withhold oil from the global market as a form of leverage over other governments. EPA-HQ-OAR-2018-0283_11 [JA ____]; Tom DiChristopher, *Why the Market is Suddenly Concerned Saudi Arabia Will Weaponize Oil in Khashoggi Dispute*, CNBC, <https://www.cnbc.com/2018/10/15/saudi-statement-sparks-concern-the-kingdom-will-weaponize-oil.html>.

In its analysis of foreign policy implications, NHTSA conceded many of the most important factual observations raised on the record that geopolitical events can affect global prices, and NHTSA admitted that “the U.S. economy would still be subject to oil price fluctuations due to external events and situations” and that

“the oil market is global and that events and situations abroad can affect oil prices even as U.S. oil production increases.” 85 Fed. Reg. at 25,150.

B. Despite NHTSA’s Agreement that the United States Is Unable to Insulate Itself from Global Supply Disruptions, NHTSA Arbitrarily Dismissed the Risk of Price Shocks to the United States Economy.

As discussed above, NHTSA agreed with the facts on record demonstrating that the U.S. economy still faces considerable risks from global political events. 85 Fed. Reg. at 25,150. Based on these risks, and the ongoing risk to consumers, the record demonstrated that the only way to adequately protect U.S. consumers was not to take oil from domestic sources but rather to reduce oil consumption in general. *See supra* Background at p. 7-11.

NHTSA conceded that its objective in responding to these risks was to reduce them to the greatest extent feasible. For example, NHTSA pointed out that “[s]triving for energy independence in a global market necessarily means *reducing* risks, because even if the U.S. consumed only domestically-produced petroleum and continued to export, the U.S. economy would still be subject to oil price fluctuations due to external events and situations.” 85 Fed. Reg. at 25,150 (emphasis in original).

Despite this reality, and its substantial factual agreement with the record, NHTSA insisted that the risk was *low enough* that there was no longer a great need

for the U.S. to conserve energy. *Id.* Specifically, NHTSA insisted that it “simply believe[d]” the U.S. was adequately insulated from supply disruptions abroad given heightened domestic production. *Id.* There is no factual or legal basis in the record to support NHTSA’s conclusion. NHTSA’s conclusion was arbitrary for two key reasons.

First, and most strikingly, NHTSA’s conclusion was unsupported because the agency cited *no* additional evidence for its conclusion beyond the facts on the record that it had already conceded. Indeed, virtually all of NHTSA’s cited evidence points to *continued* exposure of American consumers and the U.S. economy to price disruptions caused by international oil market fluctuations. *See id.* NHTSA conceded as much; it accepted that the U.S. economy and U.S oil consumption can never be fully insulated from the global oil market, as long as the U.S. continues to consume significant quantities of oil, and that CAFE standards can reduce the risk posed by global oil market dynamics by reducing oil consumption within the U.S. economy. *Id.* The agency further conceded ongoing geopolitical risks that are creating and will likely continue to create disruption in the global oil market. *Id.*; *see supra* Background at p. 13. Despite all this evidence of the importance of reducing U.S. oil consumption to reduce risks to the U.S. economy, NHTSA claimed, in its own words, to *believe* that currently higher domestic production is sufficient to reduce risk without providing any evidence to

support this conclusion. This belief is not based on any additional evidence to indicate that the above risks are less severe than commenters suggested, but apparently based on its observation that the U.S. economy is less at risk than it was at the beginning of the CAFE program. 85 Fed. Reg. at 25,150.

NHTSA's conclusion was arbitrary in that it solely relied on belief rather than evidence. An agency must justify its rulemakings with "a satisfactory explanation for its action including a rational connection between the facts found and the choice made." *Motor Vehicle Manufacturers Ass'n v. State Farm Automobile Ins. Co.*, 463 U.S. 29, 43 (1983) (internal citations omitted). The record made clear that regardless of how much oil the U.S. produces, it is susceptible to supply disruptions abroad. EPA-HQ-OAR-2018-0283_7 [JA _____]; Deutch & Schlesinger, *supra* page 13. Given the facts from the record that NHTSA conceded, its own "ipse dixit cannot substitute for reasoned decisionmaking." *Music Choice v. Copyright Royalty Bd.*, 970 F.3d 418, 429 (D.C. Cir. 2020) (holding that the Copyright Royalty Board's amendment of royalty audit procedures, "stating only 'that it can see no reasons not to,'" constituted a substantive change in policy without demonstrating good reasons to support that change). In relying on its own beliefs rather than the serious risks raised on the record and conceded in the final rulemaking, NHTSA's evaluation of risk to the U.S. economy was arbitrary.

Second, to the extent that NHTSA did attempt to justify its conclusion on more than pure belief, its understanding of risk to the U.S. economy was fundamentally flawed. The agency based its conclusion on its view “that the risk of damage to the U.S. economy and of additional pain for U.S. drivers is lower than it was at the beginning of the CAFE program.” 85 Fed. Reg. at 25,150. In other words, NHTSA believes that it does not need to conserve energy now because the U.S. is less at risk than it was nearly 50 years ago when the EPCA was enacted.

Such a comparison is antithetical to the purpose of EPCA as recognized by this Court. In enacting the EPCA, “Congress intended energy conservation to be a long-term effort that would continue through temporary improvements in energy availability.” *Center for Auto Safety v. NHTSA*, 793 F.2d 1322, 1340 (D.C. Cir. 1986). In other words, the EPCA created a program of deliberately increasing energy conservation over time. As such, NHTSA’s use of the beginning of the CAFE program as a baseline is functionally useless as a measure of the risk the U.S. economy faces today.

NHTSA is under a statutory obligation to promote the long-term goal of energy conservation. Therefore, to meet this obligation it must determine how the interests of the United States may currently be best advanced by CAFE standards. NHTSA has not shown that the conditions that prompted the creation of the EPCA—the vulnerability of U.S. consumers and the U.S. economy to

international oil market dynamics— have changed such that the purposes of the EPCA can be abandoned and that vulnerability can be increased through this action.

Ultimately, in its analysis of foreign policy implications NHTSA admitted to the various ongoing risks U.S. drivers and the U.S. economy face from changes in the global oil market. 85 Fed. Reg. at 25,150 (“NHTSA agrees with commenters that the oil market is global, and that events and situations abroad can affect oil prices even as U.S. oil production increases.”); *id.* At 24,726 (“Geopolitical factors influence the global oil price—unstable regimes are often unreliable suppliers, large suppliers attempt strategically to manage supply to influence price or retain market share, and international negotiations around politically sensitive topics can influence the production behavior of firms in oil-rich nations.”) The commenters concluded that the only way to truly reduce these risks is to promote energy conservation. EPA-HQ-OAR-2018-0283_12 [JA ____]. However, despite accepting all of the commenters’ underlying facts, NHTSA departed from their conclusion. NHTSA’s conclusion was based on no additional evidence and relied on the erroneous understanding that vulnerability to global price shocks is appreciably lower than it was 50 years ago. The agency’s analysis of foreign policy implications was unsupported by law or fact, and therefore arbitrary.

CONCLUSION

Under the EPCA, NHTSA is required to evaluate the need of the United States to conserve energy. 42 U.S.C. § 32902(f). The Act provides that NHTSA “shall” set the “maximum feasible” CAFE standards. 42 U.S.C. § 32902(a). EPCA requires NHTSA to promote the over-arching, long-term goal of energy conservation. *Center for Auto Safety*, 793 F.2d at 1340. Facts and analysis submitted to the record demonstrate that consumers and the U.S. market as a whole can be protected from fluctuations in the price of oil through energy conservation driven by strong CAFE standards and continued investment in alternative energies and technologies, such as electric cars. Those steps are both more effective and realistic than putting faith in shale as a steady swing supply which will last indefinitely and will single-handedly counteract the effects of global price shocks. EPA-HQ-OAR-2018-0283_11 [JA ____]; DEUTCH & SCHLESINGER at 32-33.

NHTSA agreed with the factual basis presented by the commenters and offered no evidence to the contrary.

NHTSA violated its statutory obligation to set the “maximum feasible” CAFE standards. NHTSA’s determination that there is no longer a great need for the U.S. to conserve energy is unsupported by the record. Because it has acted arbitrarily, capriciously, and in a manner contrary to the evidence on the record,

amicus respectfully requests that NHTSA's new CAFE standards be set aside by this Court. 5 U.S.C. § 706(a)(2).

Respectfully Submitted,
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CERTIFICATE OF COMPLIANCE

Per Fed. R. App. P. 29(a)(4)(G), Fed. R. App. P. 29(a)(5), I certify that this amicus brief complies with the type-volume limitations because its textual portions, including headings, footnotes, and quotations contain 4,417 words, as counted by the “Word Count” feature of Microsoft Word for Mac license 2019, version 16.45, the program with which this brief was prepared. This word count excludes: (1) the cover page; (2) the table of contents; (3) the Rule 26.1 corporate disclosure statement; (4) certificates; (5) the glossary of abbreviated terms and terms of art; and (6) the signature block.

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CERTIFICATE OF SERVICE

Pursuant to Rule 25(d) of the Federal Rules of Appellate Procedures, I hereby certify that I have this 20th day of January, 2021, served the foregoing Amicus Brief of Professor Bordoff, by first class mail, postage prepaid or electronic mail through the Court's CM/ECF system upon the parties to the proceeding below as listed in the Service Preference Report.

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EXHIBIT A

CURRICULUM VITAE OF PROFESSOR
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Jason Eric Bordoff

EMPLOYMENT

- Columbia University School of International and Public Affairs, New York, NY 2013–present
Professor of Professional Practice in International and Public Affairs
Founder and Director, Center on Global Energy Policy
- The White House, Washington DC 2009–2013
National Security Council, *Special Assistant to the President and Senior Director for Energy and Climate Change*
Council on Environmental Quality, *Associate Director for Energy and Climate Change*
- The Hamilton Project, The Brookings Institution, Washington, DC 2005–2009
Policy Director
- Hon. Stephen F. Williams, U.S. Court of Appeals for the D.C. Circuit 2004–2005
Law Clerk
- U.S. Treasury Department, Washington, DC 2000–2001
Special Assistant to Deputy Secretary Stuart E. Eizenstat
- McKinsey & Company, New York, NY 1998–2000
Consultant

EDUCATION

- Harvard Law School, J.D., *cum laude*, 2004
Honors: *Treasurer and Editor, Harvard Law Review*
- Oxford University, M. Litt. in Politics, 1998
Honors: *British Marshall Scholarship*
- Brown University, Honors A.B. in Political Science and Judaic Studies, *magna cum laude*; 1994
Honors: *Phi Beta Kapp*

SELECTED PUBLICATIONS

Books

Path to Prosperity (Brookings Press 2008, Jason Furman and Jason Bordoff, eds.).

Book Chapters

“Expanding Energy Access: An Assessment of U.S. Policy,” in *Energy Poverty: Global Challenges and Local Solutions* (Oxford University Press, November 2014, Antoine Halff, Benjamin K. Sovacool, and Jon Rozhon, eds.).

“International Trade Law and the Economics of Climate Policy: Evaluating the Legality and Effectiveness of Proposals to Address Competitiveness and Leakage Concerns,” in *Climate Change, Trade and Competitiveness: Is a Collision Inevitable* (Brookings Press 2009, Lael Brainard and Isaac Sorkin, eds.).

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PUBLIC PRESENTATIONS AND LECTURES

Bordoff, Jason (July 2020). Invited Speaker. (*Green Stimulus*) at Center on Global Energy Policy Virtual Roundtable on Climate-Oriented Economic Recovery, Virtual Event.

Bordoff, Jason (June 2020). Co-Organizer and Speaker. (*Sustainable Recovery*) at the IEA World Energy Outlook Special Report Presentation, Virtual Event.

Bordoff, Jason (June 2020). Invited Speaker. (*Contributions to the Global Economy and Energy Market*) at the Technical Workshop on OPEC at 60, Virtual Event.

Bordoff, Jason (June 2020). Invited Speaker. (*Energy Trends*) at the Columbia Energy Journalism Initiative Seminar with Senator Heidi Heitkamp, Virtual Event.

Bordoff, Jason (June 2020). Invited Speaker. (*Peak Oil? The Future of Oil and Gas Markets After the Pandemic*) at the Royal United Services Institute Premier Perspectives Webinar, Virtual Event.

Bordoff, Jason (June 2020). Invited Speaker. (*The Future of Energy*) at the VIP Environmental Defense Fund Web Event, Virtual Event.

Bordoff, Jason (May 2020). Invited Speaker. (*Emergence of a New Global Energy Order*) at the Gastech Webinar Series, Virtual Event.

Bordoff, Jason (May 2020). Invited Speaker. (*Energy and Environmental Implications of COVID-19*) at the Sloan Foundation, New York, NY.

Bordoff, Jason (May 2020). Invited Speaker. (*Oil and Gas Industry Oversight in the Time of Coronavirus*) at the Center for American Progress, New York, NY.

Bordoff, Jason (May 2020). Invited Speaker. (*The Oil Industry and COVID-19*) at Columbia Inside Series, New York, NY.

Bordoff, Jason. (April 2020). Invited Speaker. (*Climate Change and Energy*) at Obama Scholars Convening, New York, NY.

Bordoff, Jason. (April 2020). Invited Speaker. (*After Agreement to Cut Production, What’s Next for Oil and Gas Producing Countries?*) at The Arab Gulf States Institute in Washington and Center on Global Energy Policy Joint Webinar, New York, NY.

Bordoff, Jason (March 2020). Invited Speaker. (*Impact of the Coronavirus Pandemic on the Energy System*) at Earth Institute Faculty Meeting, New York, NY.

Bordoff, Jason (March 2020). Invited Speaker. (*Global Energy Policy*) at Earth Institute workshop, New York, NY.

Bordoff, Jason (February 2020). Invited Speaker. (*Opportunities for City Leadership in Climate Action*) at a Briefing with Mayor Eric Garcetti of Los Angeles, Chair of C40 Cities Climate Leadership Group, Los Angeles, CA.

Bordoff, Jason (February 2020). Invited Speaker. (*Unprecedented threats, unprecedented measures: The geopolitical risks of climate change*) at the Munich Security Conference on Energy Dialogue, München, Germany.

Bordoff, Jason (February 2020). Invited Moderator. (*Staring Down the Barrel – Energy Security, Geopolitics and Transatlantic Cohesion*) at the Munich Security Conference on Energy Dialogue, München, Germany.

Bordoff, Jason (January 2020). Invited Speaker. (*Workshop on Gas Flaring*) at the Center on Global Energy Policy and the Energy Institute of the University of Texas joint workshop, Austin, TX.

Bordoff, Jason (January 2020). Invited Speaker. (*Global Methane*) at the Global Methane Roundtable, London, UK.

Bordoff, Jason (January 2020). Invited Speaker. (*Energy Think Tank Session*) at the 12th International Petroleum Technology Conference (IPTC), Dhahran, Kingdom of Saudi Arabia.

Bordoff, Jason (January 2020). Invited Speaker. (*Financing the Upstream in an ESG World*) at the Atlantic Council Global Energy Forum, Abu Dhabi, UAE.

Bordoff, Jason (November 2019). Invited Moderator. (*Energy and Geopolitics*) at the Center on Global Energy Policy & Paris Energy Club Joint Workshop, Paris, France.

Bordoff, Jason (November 2019). Invited Moderator. (*How is the industry embracing digital innovation? – Exploiting megatrends will be critical in developing and scaling new capabilities. What potential disruptors must the industry embrace? – Energy trends, policy formation and geopolitical factors affecting the global oil and gas industry*) at ADIPEC, Abu Dhabi, UAE.

Bordoff, Jason (November 2019). Invited Speaker. (*Technical Workshop on global oil pipelines, shipping and chokepoints*) at OPEC Video Conference, New York, NY.

Bordoff, Jason (October 2019). Invited Co-Chair. (*Innovating a New Energy Economy: Benefits for Jobs, Climate, and American Prosperity*) at the Aspen Institute Congressional Conference, Aspen, CO.

Bordoff, Jason (October 2019). Invited Speaker. (*Challenges to the Energy Transition in the Gulf Countries*) at AGSIW's Fifth Annual Petro Diplomacy Conference, Washington, D.C.

Bordoff, Jason (September 2019). Invited Moderator. (*Energy Dialogue: Latest Trends of LNG Market and Energy Related Policies ~ Solutions for Energy Access, Environment and Energy Security*) at the LNG Producer-Consumer Conference 2019, Tokyo, Japan.

Bordoff, Jason (September 2019), Invited Speaker. (*Navigating Geopolitics at the Edge: How Will the Industry Pivot to Embrace New Markets, New Supply Sources and New Competition?*) at GASTECH, Houston, TX.

Bordoff, Jason (September 2019). Invited Speaker. (*Energizing the circular economy*) at the 2019 Abu Dhabi World Energy Congress, Abu Dhabi, UAE.

Bordoff, Jason (September 2019). Invited Speaker. (*Enabling Sustainable Evolution*) at the 45th annual forum of the European House-Ambrosetti, Lake Como, Italy.

Bordoff, Jason (August 2019). Invited Panelist. (*Aspen Energy Week*) at the Aspen Institute Energy Environment Program, Aspen, CO.

Bordoff, Jason (July 2019). Invited Co-Chair. (*Global Energy Forum*) at the Aspen Institute Energy Environment Program, Aspen, CO.

Bordoff, Jason (July 2019). Invited Co-Chair. (*Global Energy Forum*) at the Aspen Institute Energy Environment Program, Aspen, CO.

Bordoff, Jason (June 2019). Invited Speaker. (*How America's "Self-Sufficiency" in Energy Affects the Relationship with the Gulf Countries*) at The John Sloan Dickey Center – Dartmouth, Hanover, NH.

Bordoff, Jason (March 2019). Invited Speaker (*US Energy Abundance and Geopolitics*) at CERAWeek, Houston, TX.

Bordoff, Jason (February 2019). Invited Speaker (*Key Stakeholder and Industry Views on Short, Medium, and Long-Term Energy Outlooks*), at the 9th IEF-OPEC Symposium on Energy Outlook, Riyadh, Saudi Arabia.

Bordoff, Jason (February 2019). Invited Speaker (*Efficiency drivers and gains in hydrocarbon supply chains*), at the 9th IEF-OPEC Symposium on Energy Outlook, Riyadh, Saudi Arabia.

Bordoff, Jason (February 2019). Invited Speaker (*A New Reality for US Energy Security*) at the International Petroleum Week, London, UK.

Bordoff, Jason (February 2019). Invited Chair (*Most pressing challenges related to energy security and the energy markets seen from a geopolitical perspective*) at the Munich Security Conference, Munich, Germany.

Bordoff, Jason (January 2019). Invited Chair (*Methane Roundtable*), Paris, France.

Bordoff, Jason (October 2018). Invited Speaker (*US and Russian Oil and Gas Sectors in the New Global Order*) at Skoklovo Energy Center, Skoklovo, Moscow.

Bordoff, Jason (September 2018). Invited Speaker. (*The Pervasiveness of Climate*) at Texas Tribune Festival, Austin, TX.

Bordoff, Jason (September 2018). Invited Speaker. (*What Happens in Energy in Texas Impacts the World*) at the Cynthia and George Mitchell Foundation, Austin, TX.

Bordoff, Jason (September 2018). Invited Speaker. (*Energy Technology Leapfrogging - Could It Happen?*) at the USAEE Conference, Washington, D.C.

Bordoff, Jason (August 2018). Invited Speaker at Williams Companies, Inc. Board meeting, Tulsa, OK.

Bordoff, Jason (June 2018). Invited Moderator. (*Forum on Global Energy, Economy, and Security*) at the Aspen Institute Energy Environment Program, Aspen, CO.

Bordoff, Jason (June 2018). Invited Panelist. (*The Global LNG Market: Key Drivers, Challenges and Opportunities*) at 27th World Gas Conference, Washington, D.C.

Bordoff, Jason (June 2018). Invited Moderator. (*Innovation to drive the energy industry forward*) at 27th World Gas Conference, Washington, D.C.

Bordoff, Jason (April 2018). Invited Dinner Speaker at the PESA 2018 Annual Meeting, Greensboro, GA.

Bordoff, Jason (March 2018). Invited Speaker. (*US Energy Policy: Where markets, deregulation, and geopolitics meet*) at CERAWeek Insights Dinner, Houston, TX.

Bordoff, Jason (March 2018). Invited speaker (*Geopolitics of Energy*) at Harvard Law School Seminar, Cambridge, MA.

Bordoff, Jason (February 2018). Invited moderator (*Geopolitics in the energy transition*) at the Munich Security Conference, Munich, Germany.

Bordoff, Jason (February 2018). Invited panelist (*Geopolitics of Energy: New Resource Tension*) at Columbia Energy Symposium, New York, NY

Bordoff, Jason (December 2017). Invited speaker (*What Does an America First Energy Plan Mean for the Global Oil Market?*) at Bank of Canada, Ottawa, Canada.

Bordoff, Jason (November 2017). Invited moderator (*Global roundtable on reducing methane emissions from the natural gas value chain*), London, UK.

Bordoff, Jason (November 2017). Invited speaker (*Key issues in Global Oil Geopolitics: Trump, Venezuela, Iran, OPEC*) at JP Morgan, London, UK.

Bordoff, Jason (October 2017). Invited panelist (*Global Energy Policies*) at IICEC 8th International Energy and Climate Forum, Istanbul, Turkey.

Bordoff, Jason (October 2017). Invited speaker (*Nuclear Energy*) at Innovation for Cool Earth Conference, Tokyo, Japan.

Bordoff, Jason (September 2017). Invited speaker (*Oil Policies, Economic Imperatives, and Political Flashpoints*) at AGSIW's third annual Petro Diplomacy Conference, Washington, DC.

Bordoff, Jason (September 2017). Invited speaker (*US Energy Policy after Trump*) at 39th Oxford Energy Seminar, Oxford, UK.

Bordoff, Jason (September 2017). Invited moderator (*Evaluation of the Sustainable Growth Potential of Colombia and the role of electric energy*) at EY Conference, London, UK.

Bordoff, Jason (July 2017). Invited speaker (*Evaluation of the Sustainable Growth Potential of Colombia and the role of electric energy*) at ALCOGEN – Energy Matrix, Bogotá, Colombia.

Bordoff, Jason (May 2017). Invited speaker (*Energy: Public Policy & Politics*) at TPH Annual Conference, Houston, TX.

Bordoff, Jason (May 2017). Invited speaker (*Scenarios for America's Energy Sector*) at The Economist Inaugural Sustainability Summit, Austin, TX.

Bordoff, Jason (May 2017). Invited panelist (*FT Energy Transition Strategies Summit*) at Financial Times, London, UK.

Bordoff, Jason (May 2017). Invited moderator (*OPEC meeting expectations and cooperation*) at NY Energy Forum, New York, NY.

Bordoff, Jason (May 2017). Invited keynote speaker (*International Affairs Fellowship Conference*) at CFR, New York, NY.

Bordoff, Jason (May 2017). Invited keynote speaker (*Outlook on US Energy Policy under Trump*) at New York PowerCon, New York, NY.

Bordoff, Jason (April 2017). Invited keynote speaker at Naturgas Annual Convention, Cartagena, Colombia.

Bordoff, Jason (March 2017). Invited speaker (*Energy Markets in Transition: US Energy Policy and Geopolitics*) at Coronado Club Speaker Series, Houston, TX.

Bordoff, Jason (March 2017). Invited speaker (*US energy policy: Post election?*) at CERAWEEK 2017, Houston, TX.

Bordoff, Jason (February 2017). Invited keynote speaker (*Future of U.S. Energy Policy*) at CFR, Washington, DC.

Bordoff, Jason (February 2017). Invited moderator (*Energy security*) at the 53rd Munich Security Conference, Munich, Germany.

Bordoff, Jason (February 2017). Invited keynote speaker (*Energy policy outlook under President Elect Trump and Industry trends and macro update with the Strategy Function ECS network*) at Statoil Headquarters, Oslo, Norway.

Bordoff, Jason (January 2017). Invited keynote speaker at the Congressional Research Service, Briefing for New Members of Congress, Williamsburg, VA.

Bordoff, Jason (November 2016). Invited speaker (*Energy Policy*) at Greater Houston Partnership Event, Houston, TX.

Bordoff, Jason (November 2016). Invited keynote speaker (*Gas renaissance: new supplies into Europe*) at European Autumn Gas Conference, The Hague, Netherlands.

Bordoff, Jason (November 2016). Invited keynote speaker (*Energy Dialogue*) at KAPSARC, Riyadh, Saudi Arabia.

Bordoff, Jason (October 2016). Invited keynote speaker (*The changing energy and energy policy landscape in the US*) at GIIGNL, New Orleans, Louisiana.

Bordoff, Jason (October 2016). Invited keynote speaker (*Market Volatility: Impacts on Energy Security and National Security*) at the Second Statoil Seminar at Ditchley Park on Energy Security, Ditchley Park, Oxfordshire.

Bordoff, Jason (October 2016). Invited panelist (*What Will the U.S. Election Mean for Energy Markets?*) at PIRA Week, New York, NY.

Bordoff, Jason (October 2016). Invited panelist (*Strategic / Future Scenario for Natural Gas: Responding to Climate Change and Clean Air*), at the G20 Natural Gas Day, Beijing, China.

Bordoff, Jason (September 2016). Invited keynote speaker (*The future of hydrocarbons – Challenges and Answers - International Outlook*) at the II International Congress acp - The Future Of Oil And Gas: Challenges & Answers, Bogotá, Colombia

Bordoff, Jason (September 2016). Invited keynote speaker (*US Energy Policy*) at the 38th Oxford Energy Seminar, Oxford, England.

Bordoff, Jason (July 2016). Invited speaker (*Emerging Trends in Global Energy Markets*) for the The Aspen Institute Energy Policy Forum: “Leaning into The Energy System of The Future”, Aspen, CO.

Bordoff, Jason (June 2016). Invited moderator (*Strategic / Future Scenario for Natural Gas: Responding to Climate Change and Clean Air*), at the G20 Natural Gas Day, Beijing, China.

Bordoff, Jason (June 2016). Invited speaker (*AGA Executive Leadership Development Program*) at The American Gas Association (AGA), Washington, D.C.

Bordoff, Jason (May 2016). Invited keynote speaker (*Oil Price Volatility: Causes, Effects and Policy Implications*) at the CFR Oil Price Volatility Workshop, New York, NY.

Bordoff, Jason (April 2016). Invited keynote speaker (*Sustaining the Relevance of Energy Policy Research – Engaging Stakeholders and Reaching Intended Audiences*) at the 2016 MIT Center for Energy and Environmental Policy Research, Cambridge, MA.

Bordoff, Jason (April 2016). Invited speaker (*The 2014-2015 Oil Price Crash: A View from the US*) at The King Faisal Center for Research and Islamic Studies (KFCRIS), Riyadh, Saudi Arabia.

Bordoff, Jason (April 2016). Invited speaker (*Adapting to Change and Optimizing Kuwait's Role in World Energy*) at the 4th Kuwait Oil and Gas Summit, Kuwait City, Kuwait.

Bordoff, Jason (March 2016). Invited panelist. (*New Business and Regulatory Models for the Utility of the Future Workshop*) for KAPSARC, New York, NY.

Bordoff, Jason (March 2016). Invited keynote speaker (*Big Meets Small: A New Era Emerges*) at the 2016 MIT Energy Conference, Cambridge, MA.

Bordoff, Jason (February 2016). Invited speaker (*Fueling the Future: Energy Sources in the 21st Century*) at the Congress-Bundestag Forum, New York, NY.

Bordoff, Jason (February 2016). Invited speaker (*Energy Transition: Strategies for a New World*) for the CERAWEEK 2016, Houston, Texas.

Bordoff, Jason (February 2016). Invited speaker (*Low Oil Prices: An Opportunity or a Threat for Natural Gas?*) at KAPSARC Second Gas Workshop, Riyadh, Saudi Arabia.

Bordoff, Jason (January 2016). Invited speaker (*Geopolitical and policy implications of lower oil prices, with a focus on the role of the US*) at Abu Dhabi Investment Authority, Abu Dhabi, United Arab Emirates.

Bordoff, Jason (January 2016). Invited speaker (*The Outlook for Energy Geopolitics and Policy*) at Strategas Research Partners Policy and Election Outlook Conference, Washington, DC.

Bordoff, Jason (December 2015). Invited speaker (*2015 Energy Symposium*) for Wells Fargo Securities Research, Economics and Strategy, New York, NY.

Bordoff, Jason (December 2015). Invited speaker (*US Political and Energy Outlook*) for Statoil, New York, NY.

Bordoff, Jason (November 2015). Invited speaker (*Building Global Stability and Business Resilience in Volatile Times*) for the 7th Annual Atlantic Council Energy and Economic Summit, Istanbul, Turkey.

Bordoff, Jason (November 2015). Invited speaker (*Energy Politics and 2016*) for the Columbia University Energy Symposium, New York, NY.

Bordoff, Jason (November 2015). Invited speaker (*Energy: A Realistic Path to Clean Growth*) for Columbia Business School/Progressive Policy Institute conference, Agenda 2016: Reviving U.S. Economic Growth, New York, NY.

Bordoff, Jason (November 2015). Invited speaker (*The 2014 Oil Price Crash: Causes and Consequences*) for the Rutgers Energy Institute Policy Seminar Series, New Brunswick, NJ.

Bordoff, Jason (November 2015). Invited keynote speaker (*The new realities of the energy industry*) for The Economist's Energy Summit, London, UK.

Bordoff, Jason (October 2015). Invited speaker (*International Gas Union Council Workshop*) for International Gas Union (IGU) Cartagena, Columbia.

Bordoff, Jason (October 2015). Invited keynote speaker (*Challenges for energy policy in a changing world: geopolitics, business outlook, and European energy strategy*) for The Global Annual Energy Meeting “The Coming Energy Market”, ESADE Business School, Madrid, Spain.

Bordoff, Jason (October 2015). Invited speaker (*Gas Prices: Interaction with other Energy Markets and Impact of Market Changes*) at the 10th Annual OIES Gas Day, St. Catherine's College, Oxford, England.

Bordoff, Jason (October 2015). Invited speaker (*Energy Security at a Time of Crisis, Conflict and Volatility*) for The Ditchley Foundation, Oxford, England.

Bordoff, Jason (October 2015). Invited panelist (*North American And Global Energy Collaboration Partnerships, Opportunities, Challenges And Setting The Stage For An On-Going Energy Revolution*) for North American Gas Forum, Washington, D.C.

Bordoff, Jason (September 2015). Invited speaker (*Energy Markets Under Stress*) for the Stiftung Wissenschaft und Politik (SWP) German Institute for International and Security Affairs Global Issues Division, Ludwigkirchplatz, Berlin, Germany.

Bordoff, Jason (September 2015). Invited keynote speaker (*US Energy Dynamics in a Low Price Environment*) for the 37th Oxford Energy Seminar, St. Catherine's College, Oxford, England.

Bordoff, Jason (July 2015). Invited speaker (*New Global Pricing Realities and Effects on Domestic Energy*) for the The Aspen Institute Energy Policy Forum: “Leaning into The Energy System of The Future”, Aspen, CO.

Bordoff, Jason (June 2015). Invited speaker (*Growing together towards a friendly planet*) for the 26th World Gas Conference, Paris, France.

Bordoff, Jason (May 2015). Invited speaker (*Global Harmonized Carbon Pricing: Looking Beyond Paris*) for Yale Center for the Study of Globalization, New Haven, CT.

Bordoff, Jason (May 2015). Invited keynote speaker (*Energy Security Summit 2015 Crises and Prices: Energy Security Amidst Multiple Uncertainties*) for The Frankfurter Allgemeine Forum and the Munich Security Conference (MSC), Berlin, Germany.

Bordoff, Jason (April 2015). Invited speaker (*Downstream Strategies in a Low Price Environment*) for the CERAWEEK 2015, Houston, Texas.

Bordoff, Jason (April 2015). Invited keynote speaker (*The Role of Energy in the Special Relationship*) for the 60th Anniversary of the Marshall Scholarship Association hosted at Rice University, Houston, Texas.

Bordoff, Jason (March 2015). Invited keynote speaker (*The 2014 Oil Price Crash: What Caused It and Why It Matters*) at the Arthur D. Storke Memorial Lecture at Lamont Doherty Earth Observatory, New York, NY.

Bordoff, Jason (March 2015). Invited keynote speaker (*The Role of the US in a Changing Oil Market*) at the King Faisal Center for Research and Islamic Studies, Riyadh, Saudi Arabia.

Bordoff, Jason (March 2015). Invited keynote speaker (*The Role of the US in a Changing Oil Market*) at the Kuwait Economic Council, Kuwait City, Kuwait.

Bordoff, Jason (February 2015). Invited panelist (*Energy and the G20*) hosted by the Global Relations Forum, Istanbul, Turkey.

Bordoff, Jason (February 2015). Invited panelist (*Impacts of the Oil Price Drop*) at the Council on Foreign Relations, San Francisco, California.

Bordoff, Jason (February 2015). Invited panelist (*The Impacts of Cheap Gasoline*) at Climate One, San Francisco, California.

Bordoff, Jason (January 2015). Invited keynote speaker (*Navigating a Stormy Energy Landscape*) at the Argus Americas Crude Summit, Houston, Texas.

Bordoff, Jason (December 2014). Invited panelist (*The Impact of the US Shale Boom on the Middle East*) at the conference Israel, the US, and the Shifting Energy Landscape hosted by the Institute for National Security Studies, Tel Aviv, Israel.

Bordoff, Jason (December 2014). Invited panelist (*The New North American Opportunity*) at the Privcap Energy Game Change conference, Houston, Texas.

Bordoff, Jason (November 2014). Invited keynote speaker (*The Evolving Global Natural Gas Market*) at the 2014 Workshop on the Changing Global Energy Landscape: Impacts for Brazil hosted by the Federal University of Rio de Janeiro, Rio de Janeiro, Brazil.

Bordoff, Jason (November 2014). Invited keynote speaker (*Africa's Role in the Changing Global Natural Gas Market*) at the 2014 Africa Energy Conference hosted by the Colorado School of Mines, Denver, Colorado.

Bordoff, Jason (November 2014). Invited panelist (*Plenary Session: Europe's Energy Security – Challenges and Opportunities*) at the 6th Atlantic Council Energy and Economic Summit, Istanbul, Turkey.

Bordoff, Jason (October 2014). Invited panelist (*European Policy Forum: Adjusting Policy to New Energy Realities*) at the FT European Gas Summit, London, UK.

Bordoff, Jason (September 2014). Invited keynote speaker (U.S. Crude Oil Export Policy) at Argus Crude Oil Forum, Singapore.

Bordoff, Jason (July 2014). Invited presenter (*Policy implications of crude oil exports*) and panelist at US Energy Information Administration Annual Conference, Washington, DC.

Bordoff, Jason (May 2014). Invited panelist at Energy Visions Business Forum 2014, Calgary, Canada.

Bordoff, Jason (May 2014). Invited panelist (*Energy 2020 – Modernizing America’s Energy System*) at ThirdWay Growth Dialog, Washington, D.C.

Bordoff, Jason (March 2014). *Shifting Global Energy Landscape: The View from North America*. Invited keynote speaker at Stavanger Day hosted by Statoil ASA, Stavanger, Norway.

Bordoff, Jason (March 2014). Invited panelist (*Pipes, Trains and Barges: The Transformation of North American Oil Logistics*) at CERAWEEK 2014, Houston, TX.

Bordoff, Jason (February 2014). Invited speaker (*Why Should We Worry about the Adequacy of Investment in Oil Supply?*) at the IEA’s 2014 Special Report Workshop: The Outlook for Energy Investment, Paris, France.

Bordoff, Jason (November 2013). Invited panelist (*Power to the People: New Energy Sources from Democratic Nations*) at the 2013 Halifax International Security Forum, Nova Scotia, Canada.

Bordoff, Jason (November 2013). Invited panelist (*Energy Efficiency and Smart Energy Strategies*) at Atlantic Council Energy and Economic Summit, Istanbul, Turkey.

Bordoff, Jason (October 2013). Invited panelist (*North America: Investing in a New Energy Superpower*) at the Bloomberg Oil and Gas Conference, Houston, TX.

Bordoff, Jason (October, 2013). Invited panelist (*How will Expanded Natural Gas Production Affect Climate Change Mitigation*) at the third session of the New Geopolitics of Petroleum and Natural Gas Series at the Bipartisan Policy Center, Washington, DC.

Bordoff, Jason (September 2013). Invited panelist (*Global Gas – North America at the Center Stage?*) at North American Gas Forum, Washington, D.C.

Bordoff, Jason (September 2013). *Understanding the North American Energy Renaissance*. Invited keynote speaker at New York Association for Energy Economics, New York, NY.

Bordoff, Jason (July 2013). *The North American Energy Boom & Climate Change*. Invited keynote speaker at Hertog Global Strategy Lecture, New York, NY.

Bordoff, Jason (July 2013). *The US Energy Renaissance*. Invited speaker at Green Energy-Green Investment conference at Beijing Foreign Studies University, Beijing, China.

Bordoff, Jason (June 2013). *Pacific Rim Impacts of US Shale Boom*. Invited speaker at 2013 EIA Energy Conference, Washington, D.C.

Bordoff, Jason (May 2013). Invited panelist (*Water and Contemporary Hydrocarbon Production*) at MIT-CSIS Energy-Water-Land Workshop, Washington, D.C.

Bordoff, Jason (March 2013). Invited panelist (*The New Logistics of North American Oil: Economics, Markets, and Politics*) at CERAWEEK 2013, Houston, TX.

Bordoff, Jason (March 2013). *Understanding the Americas Oil and Gas Boom*. Invited keynote speaker at 2013 VIII Latin American Forum on Energy and Environment, University of Texas at Austin, Jackson School of Geosciences, Austin, TX.

PROFESSIONAL ASSOCIATIONS AND VOLUNTEER ACTIVITIES

- Council on Foreign Relations, *Member*
- Winrock International (international aid and economic development nonprofit), *Member of Board of Directors*
- New York Energy Forum (non-profit to foster public understanding of energy issues), *Member of Board of Directors*
- New York State and D.C. Bar Associations, *Member*
- National Petroleum Council (federally chartered advisory committee to Secretary of Energy), *Member*
- Macro Advisory Partners, *Senior Advisor*
- Financial services firm (2), *Advisor*
- Radia, *Advisory Board*